

FLORIDA STATE LIBRARY

PLANNING DIVISION

# FIFTH BIENNIAL REPORT

OF THE

## STATE ROAD DEPARTMENT



OF THE

## STATE OF FLORIDA

FOR THE PERIOD

BEGINNING JANUARY 1, 1923

AND

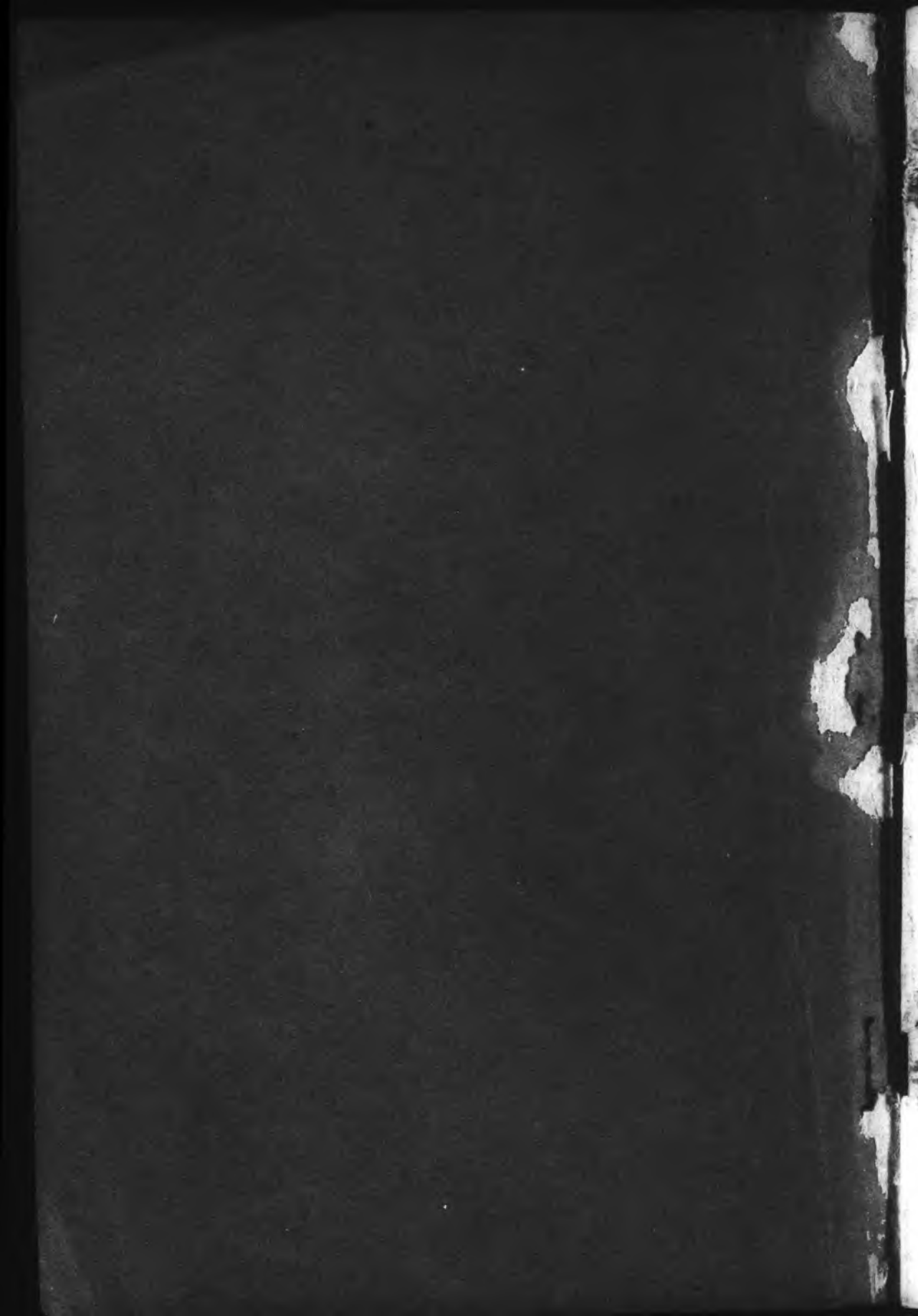
ENDING DECEMBER 31, 1924

T. J. APPELVARD, PRINTER, TALLAHASSEE, FLORIDA



FL 25.75

R7



FLORIDA STATE LIBRARY

# FIFTH BIENNIAL REPORT

OF THE

## STATE ROAD DEPARTMENT



OF THE

## STATE OF FLORIDA

FOR THE PERIOD

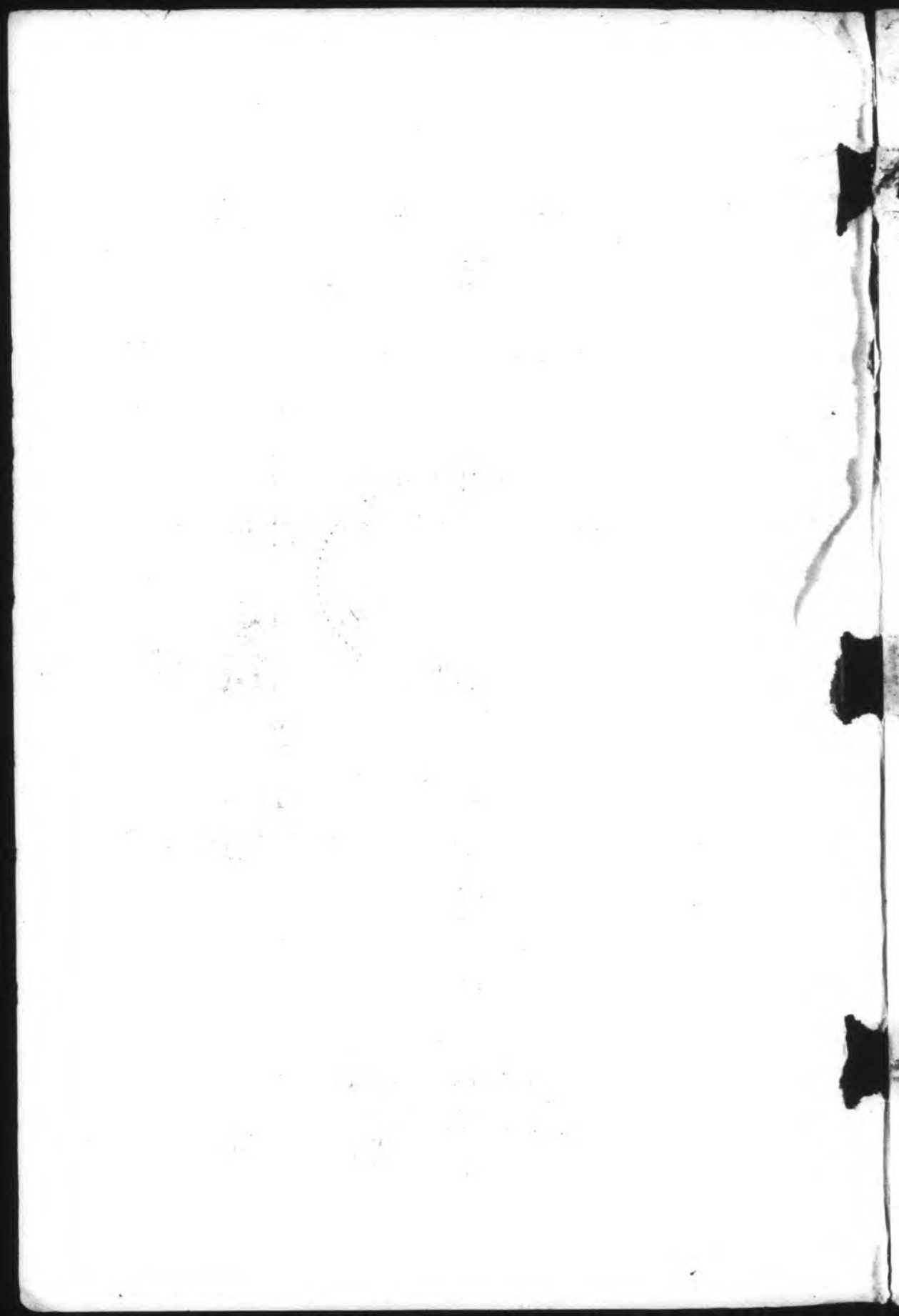
BEGINNING JANUARY 1, 1923

AND

ENDING DECEMBER 31, 1924

T. J. APPELYARD, PRINTER, TALLAHASSEE, FLORIDA











*Proj. 32 Rd. 4  
Nassau County*

Penetration Macadam Surface on Lime Rock Base, Federal Aid Project No. 32, on Road No. 4, Nassau County.

2

## PERSONNEL OF DEPARTMENT

---

H. B. Phillips, Chairman  
W. J. Hillman I. E. Schilling  
E. P. Green W. M. Corry  
B. A. Meginniss, Attorney  
Ella Creary Thompson, Secretary

---

### PERSONNEL OF EMPLOYEES IN GENERAL CHARGE OF THE WORK OF THE DEPARTMENT

#### *Engineering Division*

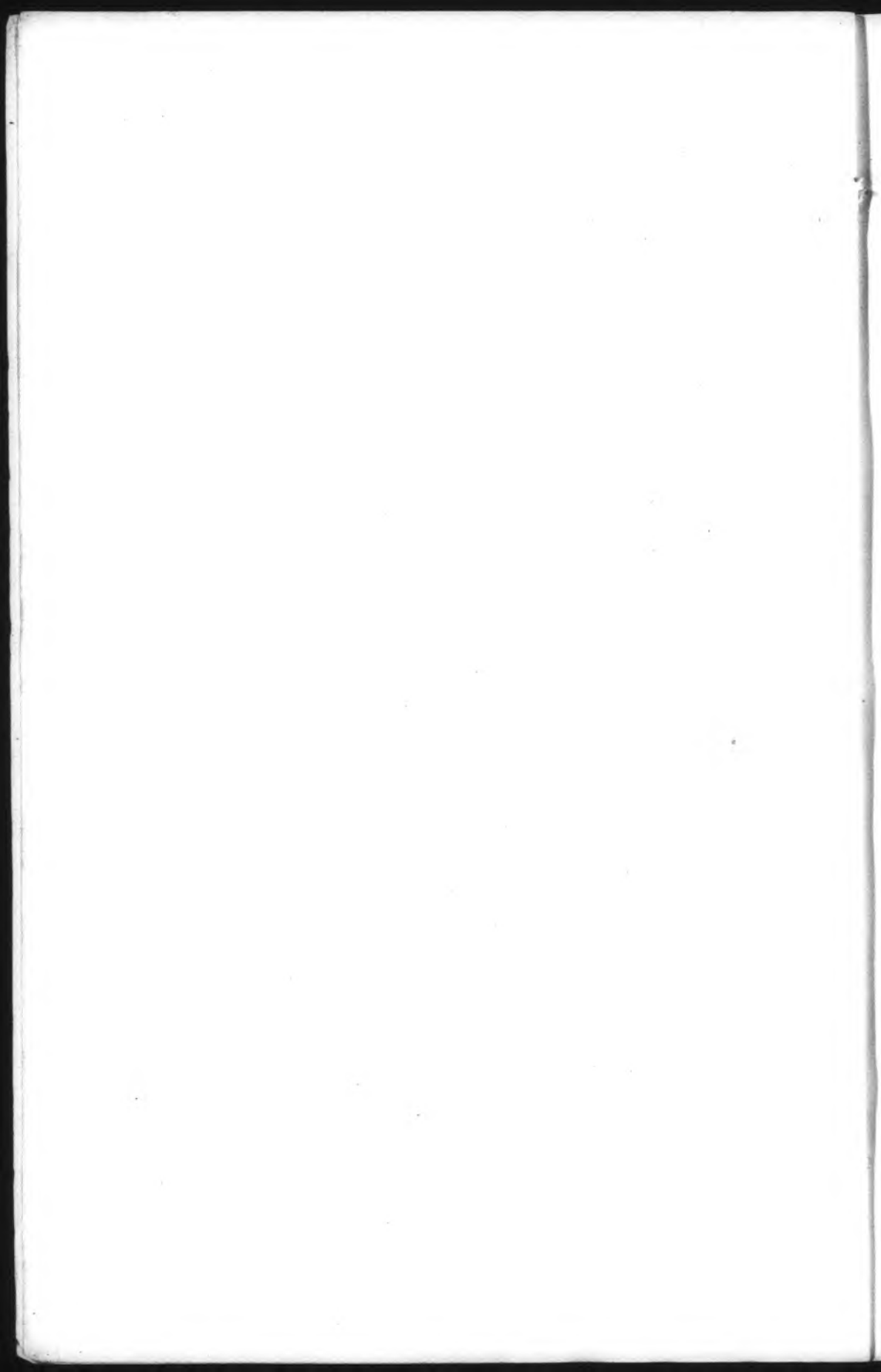
J. L. Cresap.....State Highway Engineer  
L. K. Cannon.....Assistant State Highway Engineer  
G. L. Derrick.....Bridge Engineer  
C. W. DeGinther.....Assistant Bridge Engineer  
Harvey A. Hall.....Testing Engineer  
F. W. Berry, Jr.....Office Engineer  
R. L. Bannerman.....Division Engineer First Division  
M. P. Philips.....Division Engineer Second Division  
R. J. Cassie.....Division Engineer Third Division  
L. B. Thrasher.....Division Engineer Fourth Division  
A. W. Kinney.....Division Engineer Fifth Division  
J. R. Stewart.....Superintendent of Equipment

#### *Accounting Division*

S. L. Walters.....Auditor  
Betty V. Herring.....Bookkeeper  
Jewell Smith Jones.....Bookkeeper  
W. A. Williams.....Bookkeeper

#### *Bureau of Public Roads*

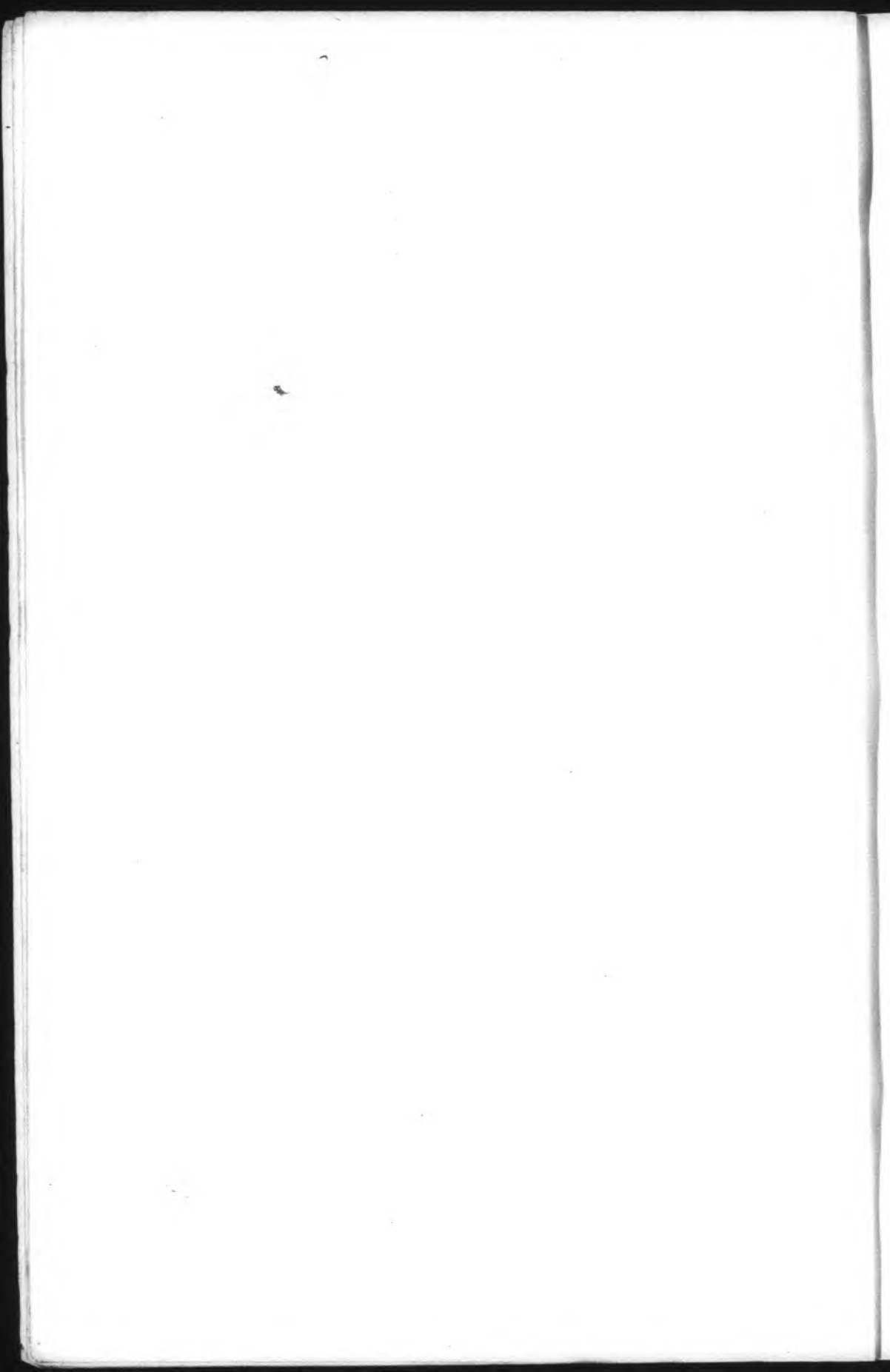
R. E. Toms.....District Engineer  
H. J. Morrison.....U. S. Highway Engineer  
E. E. Albee.....Associate Highway Engineer





Lime Rock Base on Project No. 521, Road No. 4, Nassau County.







## LETTER OF TRANSMITTAL

---

Hon. John W. Martin,  
Governor of Florida,  
Tallahassee, Florida.

Dear Sir :

In accordance with Section 8 of Chapter 7900 of the Laws of Florida, Acts of 1919, and all amendments thereto, outlining the duties of the State Road Department, I herewith submit the Biennial Report of said Department, covering the period from January 1st, 1923, to December 31st, 1924.

The accompanying reports of the State Highway Engineer and Auditor, together with the charts and tables, show the details of the work of the Department for the two-year period covered by this Report.

In stating the general policy of the Department, it is well to quote from our letter submitting our Biennial Report of 1923, wherein it was said: "In the inauguration of new work it has been our policy to confine our work, as near as possible, to the trunk line roads of the State. It has been our conviction that the State Road Department, being a State institution, spending money contributed by the whole State, it is our first duty to plan and build those roads which are of State-wide interest and will best serve the people of the whole State."

The Legislature of 1923 enacted a law providing that the Department should build State Roads Nos. 1, 2, 3, 4, 5 and 8, and upon the completion of these roads should build State Road No. 19. This Act also provides that the Department shall have authority to carry out its existing contracts and also to build such portions of the Federal System of Roads as were not included in the roads num-

bered above. The Department has complied fully with the terms of this law.

Our method or plan of construction has been to adhere to the high standard adopted in the beginning of the construction work of the Department, it being our conviction that it is unwise to spend State funds in the construction of roads having a temporary value only. It continues to be our policy to build permanent roads and bridges.

We have continued our policy of maintaining the roads constructed by the Department. As soon as a section of road is constructed, a maintenance crew is placed in charge of the same and the road is kept constantly under our care and supervision.

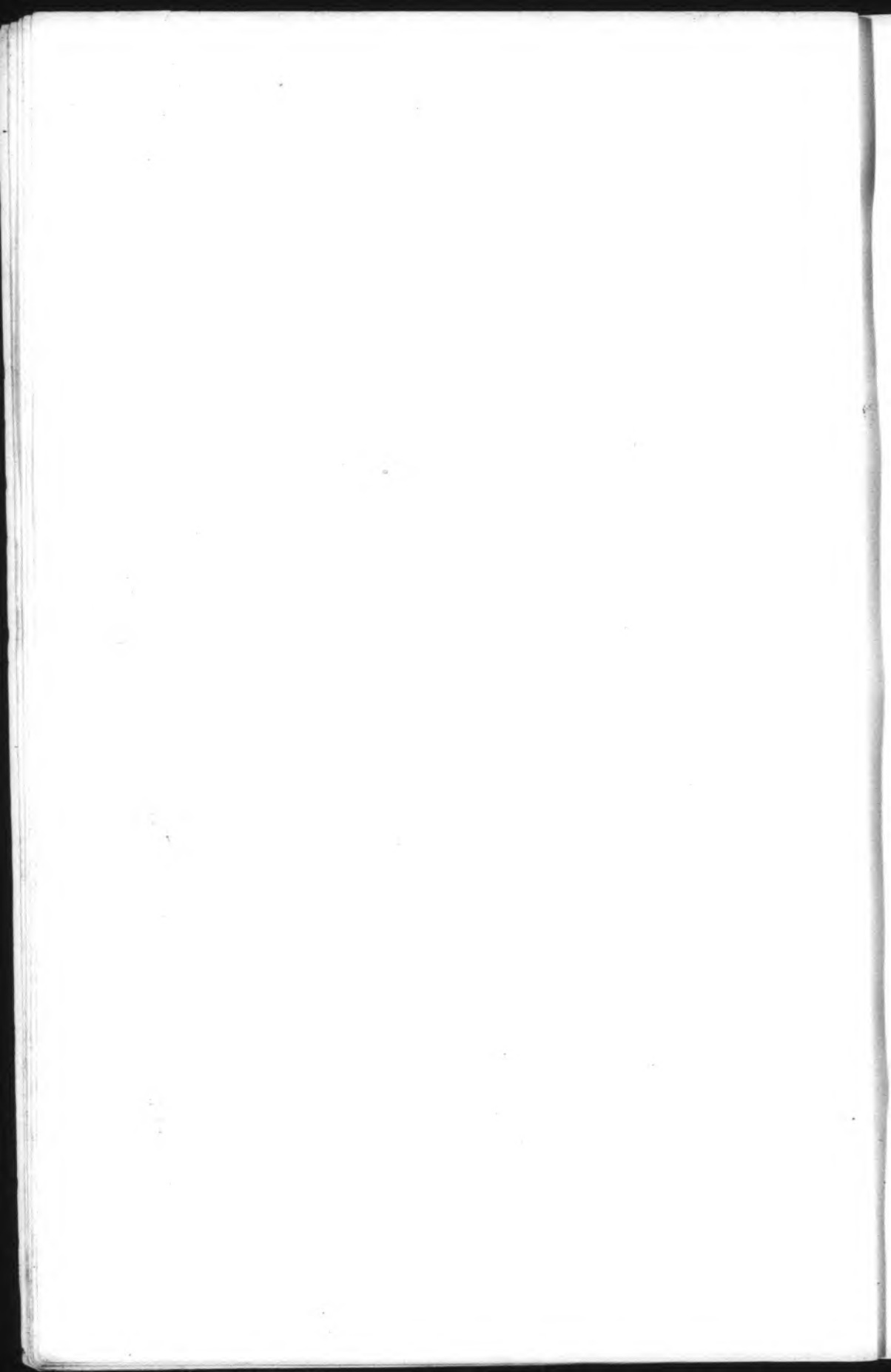
Respectfully submitted,

H. B. PHILIPS, Chairman,

State Road Department.



Sheet Asphalt Pavement on State Road No. 2, Orange County, Federal Aid Project No. 13.



# Florida's Road System

---

THE "MILLER" BILL, ENACTED BY THE LEGISLATURE OF  
1923, DEFINES THE STATE HIGHWAY SYSTEM

---

AN ACT Declaring, Designating and Establishing a System of State Roads, Providing for the Location Thereof, and Providing That Such Roads When Located and Constructed Shall Become and Be the Property of the State.

*Be It Enacted by the Legislature of the State of Florida:*

Section 1. That the following named and numbered roads be and are hereby declared, designated and established as State Roads:

Road No. 1. Extending from the Alabama State line at Nunez Ferry and from Flomaton to Jacksonville, passing through Pensacola, Milton, Crestview, DeFuniak Springs, Bonifay, Chipley, Marianna, Cypress, Chattahoochee, Quincy, Havana, Tallahassee, Monticello, Greenville, Madison, Live Oak, Lake City, Sanderson, Macclenny and Baldwin.

Road No. 2. Extending from the Georgia State line north of Jennings to Fort Myers, via Jasper, White Springs, Lake City, High Springs, Gainesville, Ocala, Leesburg, Lisbon, Grand Island, Eustis, Mt. Dora, Plymouth, Orlando, Kissimmee, Haines City, Bartow, Arcadia and Olga Bridge, also from Leesburg to Lakeland via Mascotte, Groveland, Buck Hill, Polk City to Lakeland.

Road No. 3. Extending from the Georgia State line at a point on the St. Marys River known as Wild's Landing to Orlando, via Jacksonville, Orange Park, Green Cove

Springs, Palatka, East Palatka, Crescent City, DeLand and Sanford.

Road No. 4. Extending from the Georgia State line south of Folkston to Miami, via Hilliard, Callahan, Jacksonville, St. Augustine, Bunnell, Daytona, Titusville, Ft. Pierce, West Palm Beach and Fort Lauderdale.

Road No. 5. Extending from High Springs to Fort Myers, via Newberry, Archer, Williston, Dunnellon, Inverness, Brooksville, Lutz, Tampa, Riverview, Bradentown, Sarasota, Venice and Punta Gorda.

Road No. 6. Extending from the Alabama State line south of Dothan to Apalachicola, via Campbellton, Marianna, Altha, Blountstown, Scotts Ferry, Wewahitchka and Port St. Joe.

Road No. 8. Extending from Haines City to Fort Pierce, via Lake Wales, Frostproof, Avon Park, Sebring, Lake Annie and Okeechobee City.

Road No. 9. Extending from the Georgia State line south of Quitman, via Madison, to a point on Road No. 19, near Shady Grove.

Road No. 10. Extending from the Georgia State line near Beechton to East Point, via Tallahassee, Crawfordville, Blockers Ferry and Carrabelle.

Road No. 11. Extending from Monticello to the Georgia State line toward Thomasville.

Road No. 12. Extending from Bristol to the Georgia State line, via Telogia, Hosford and Quincy toward Bainbridge.

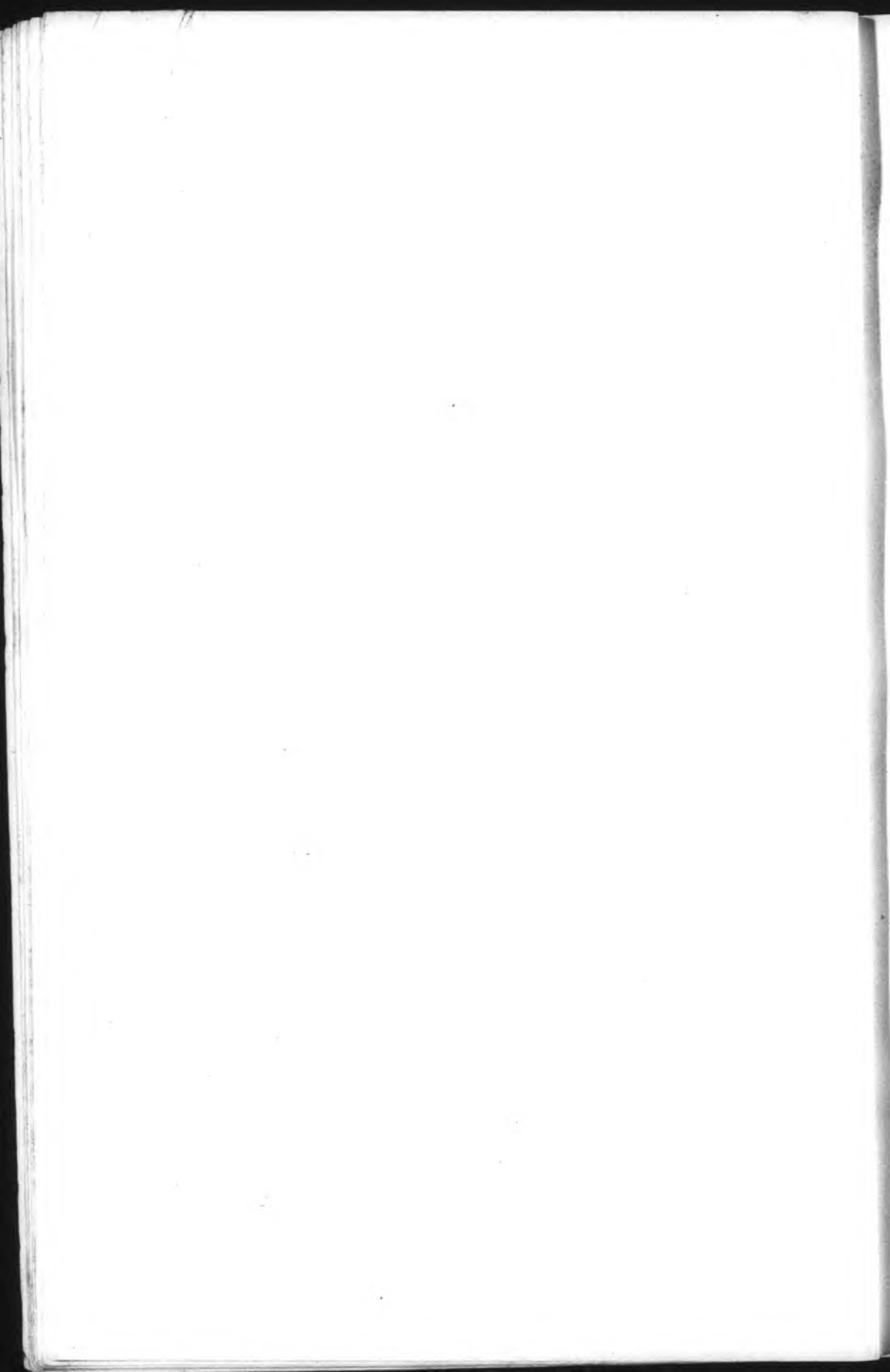
Road No. 13. Extending from Baldwin to Cedar Key, via Starke and Gainesville and Bronson.

Road No. 14. Extending from Gainesville, via Palatka, to intersection of Road No. 4, near Hastings.

Road No. 15. Extending from a point on Road No. 5 at Brooksville to St. Petersburg, via Aripeka, Hudson, New Port Richey, Tarpon Springs, Clearwater and St. Petersburg.



Federal Aid Project No. 27, Road No. 2, Columbia County. Plain Cement Concrete.





Road No. 16. Extending from Ocala to Road No. 5, via Dunnellon, thence to Holder, Crystal River, Homasassa and Aripeka.

Road No. 17. Extending from Haines City to Clearwater, via Lakeland, Plant City, Tampa and Oldsmar.

Road No. 18. Extending from Sarasota to Lake Annie, via Verna and Arcadia.

Road No. 19. Extending from State Road No. 1, east of Tallahassee, to Williston, via Perry, Cross City and Bronson.

Road No. 20. Extending from Cottondale to Panama City, via Round Lake.

Road No. 21. Extending from Daytona to DeLand.

Road No. 22. Extending from Orlando to Indian River City, via Ft. Christmas, also from Orlando to Crystal River, via Winter Garden, Clermont, Mascotte, Groveland, Bushnell and Inverness.

Road No. 23. Extending from Belleview to Plant City, via Bushnell and Dade City.

Road No. 24. Extending from Kissimmee to Melbourne, via St. Cloud.

Road No. 25. Extending from Olga Bridge to West Palm Beach.

Road No. 26. Extending from a point on Road No. 8, east of Lake Annie, to Road No. 25, via Moore Haven.

Road No. 27. Extending from Fort Myers to Miami.

Road No. 28. Commencing at Lake City, thence to Lula, via Lake Butler to Starke.

Road No. 29. Extending from Perry to Branford, via Mayo.

Road No. 30. Also from Frostproof to Vero, via Lokosee and Fort Drum.

Road No. 31. Road from Ocala to Waldo, via Citra, Island Grove and Hawthorne.

Road No. 32. From Bradentown to Avon Park, via Parrish, Fort Green and Wauchula.

Road No. 33. Extending from the Alabama State line south of Florala, via Laurel Hill to a point on Road No. 1 at or near Crestview.

Road No. 34. Extending from Brooksville to Dade City, via Spring Lake and Blanton.

Road No. 35. Extending from the Georgia line through Greenville to a point on Road No. 19.

Road No. 36. Extending from Leesburg to Inverness, via Wildwood and Rutland.

Road No. 37. Extending from the Alabama State line at Dixonville, via Allentown, to State Road No. 1 at Milton.

Road No. 38. Extending from Road No. 2 at Weirsdale, east to Umatilla, in Lake County, by way of Starke's Ferry.

Provided, that the roads designated as roads numbered from 1 to 5, inclusive, and Roads Nos. 8 and 19, said Road No. 19 to be built after Roads Nos. 1, 2, 3, 4, 5 and 8 are completed, shall be first completed before any new contracts are made for work on any of the other roads herein provided for, but this proviso shall not be construed to interfere in any way with any contracts already made with any county for construction of any part of any road or roads herein designated, nor with the construction or maintenance of such other roads as have heretofore been designated and approved by the National Secretary of Agriculture as included in the State and Federal Seven Per Cent Highway System as follows:

Road No. 6. Alabama line to Marianna.

Road No. 7. Pensacola to Alabama line at Flomaton, 44 miles.

Road No. 10. Tallahassee to Georgia line, 18 miles.

Road No. 13. Baldwin to Gainesville, via Starke, 47 miles.

Road. No. 14. Gainesville to Hastings, via Palatka.

Road No. 16. Ocala to Road No. 5, 30 miles.

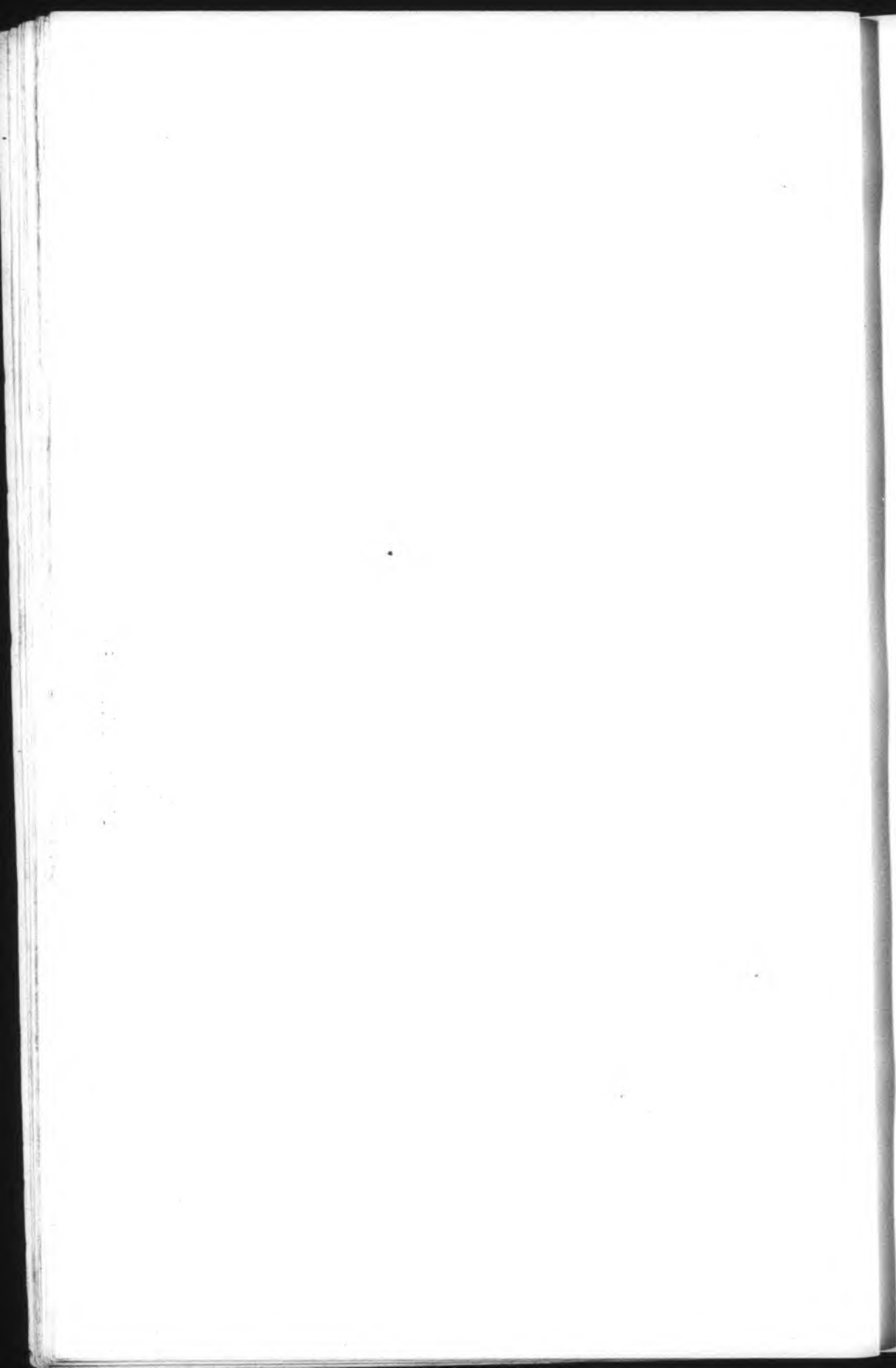
Road No. 17. Haines City to Tampa, 57 miles.

Road No. 21. Daytona to DeLand, 22 miles.

Road No. 24. Kississimmee to Melbourne, 53 miles.



Federal Aid Project No. 34, showing typical section of Plain Cement Concrete Construction.



Also 45 miles to be designated by the State Road Department and Federal Government as part of the Federal seven per cent system.

Sec. 2. That the above named and numbered roads shall be and constitute the system of State Roads of this State, and when located and constructed by the State Road Department, shall become and be the property of the State.

Sec. 3. That the State Road Department is hereby vested with authority to determine and fix the lines and location of such roads between the cities and places thereon named in Section 1 of this Act. All the laws and parts of laws applying to and affecting State Roads, designated and established by the State Road Department, shall apply to and affect the roads herein named and established as State Roads, and the State Road Department shall have all the power and authority with respect to the roads herein named and declared as it had at the time of the passage of this Act, with respect to State Roads designated and established by said Department; Provided, that said Department shall not hereafter have the power to designate and establish State Roads.

Sec. 4. All laws and parts of laws in conflict herewith be, and the same are, hereby repealed.

Sec. 5. This Act shall take effect immediately upon its becoming a law.

Approved June 8, 1923.

FLORIDA'S TRAFFIC LAW ENACTED BY THE  
LEGISLATURE OF 1923, CHAPTER  
9956—(NO. 38)

---

AN ACT Prescribing Certain Regulations for the Use of and Traffic on State Roads; Prohibiting the Use of Certain Vehicles on Such Roads; Requiring the Equipment of Trucks With Mirrors and Specifying How the Same Shall Be Installed; Fixing the Maximum Weight of Load That May Be Carried on Such Roads; Defining the Term "State Road," and Fixing Penalties for the Violations of Any of the Terms Hereof.

*Be It Enacted by the Legislature of the State of Florida:*

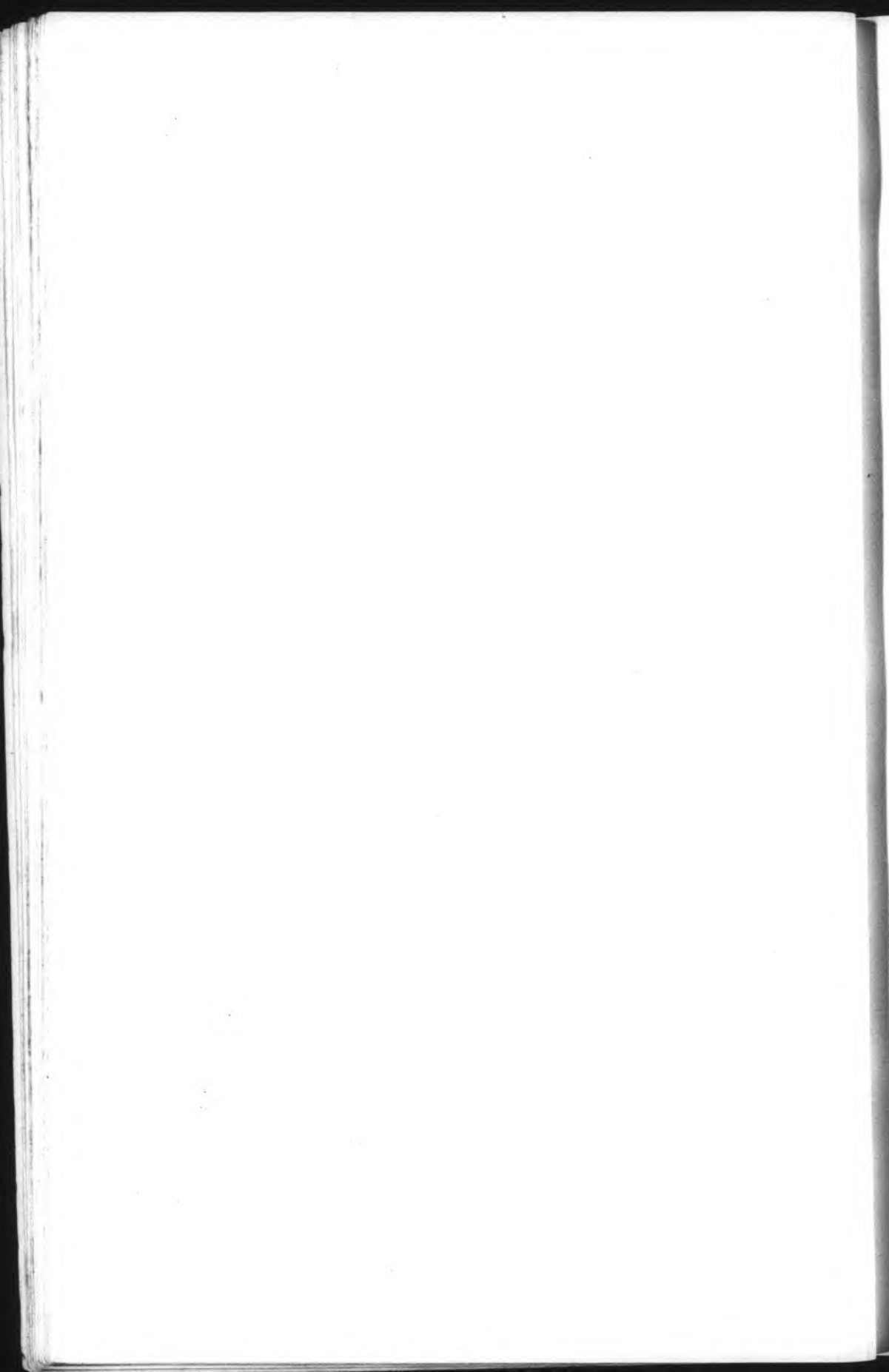
Section 1. It shall be unlawful to drive, propel or operate, or to cause to be driven, propelled or operated over any State Road, any vehicle or contrivance having wheels provided with sharpened or roughened surfaces other than roughened pneumatic rubber tires; provided, however, that this restriction shall not apply to vehicles or implements used by the State in the construction and maintenance of said State Roads, or to farm implements weighing less than one thousand (1,000) pounds, and provided with wheel surfaces of more than one-half inch in width. Wheels of traction engines, et cetera, when provided with suitable filler blocks between cleats, shall be considered as having smooth tires.

Each such truck shall be equipped with a mirror located in such position-as to show the driver thereof the approach of vehicles from the rear.

It shall be unlawful to drive, propel or operate, or to cause to be driven, propelled or operated, over any State Road any vehicle or contrivance, whose gross load on any one wheel shall exceed six hundred (600) pounds for each inch of width of tire on same; provided, further, that the width of solid tires shall be considered as that portion



Road No. 2 in Marion County, near McIntosh. Rock Base Surface-treated.





coming in contact with an unyielding surface, and the width of pneumatic tires shall be considered as the total thickness measured from outside to outside of casing at the widest point between tread and rim, when fully inflated with air; and provided, further, that no vehicle or contrivance whose gross load shall exceed sixteen thousand (16,000) pounds shall be moved or operated over any State Road.

It shall be unlawful to allow any vehicle or contrivance, or any part of same, or any load, or portion of a load, carried upon the same to drag upon any State Road.

It shall be unlawful for any vehicle or contrivance, having a gross weight of more than four thousand (4,000) pounds to operate over any State Road at a rate of speed in excess of twenty miles per hour, when equipped with pneumatic tires, or at a rate of speed in excess of twelve miles per hour when equipped with solid tires.

It shall be unlawful to place or allow to be placed upon any State Road any tacks, wire, scrap metal, glass, crockery, or other substance which may be injurious to the feet of persons or animals, or the tires of vehicles, or in any way injurious to the road.

It shall be unlawful to obstruct, dig up or in any way disturb any State Road. Provided, however, that this paragraph shall not be construed so as to hinder or prevent the installation or replacement of poles for telephone or telegraph wire lines in accordance with the provisions of law now existing or that may hereafter be enacted.

It shall be unlawful to tear down or deface any detour sign or to break down or drive around any barricade erected for the purpose of closing any section of a State Road to traffic during the construction or repair thereof, or to drive over such section of road until again thrown open to public traffic; however, such restriction shall not apply to the person or persons in charge of such construction or repairs.

Sec. 2. The term "State Road" used herein is defined and shall be construed to mean any part of any road, including the bridges thereon, heretofore or which may hereafter be designated by the Legislature or by the State Road Department, in accordance with law, as a State Road, which has been, or may hereafter be constructed, maintained, or otherwise improved by the State Road Department, or which is now, or may hereafter be, in course of construction, maintenance or improvement by such Department.

Sec. 3. Any one who violates any of the terms of this Act shall be deemed guilty of a misdemeanor, and upon conviction shall be punished by fine of not less than ten dollars (\$10.00) or more than five hundred dollars (\$500.00), or by imprisonment for not less than ten or more than ninety days, or by both fine and imprisonment.

Whoever damages any such State Road by any trespass on, or unlawful use of, or traffic over such road shall in addition to the penalties above prescribed be civilly liable for the amount of such damage, which amount may be recovered at the suit of the State Road Department, and when recovered shall be turned into the State Treasury and placed to the credit of the State Road Tax Fund.

Sec. 4. That this Act shall not affect any Special or Local law regulating road traffic in the several counties of this State.

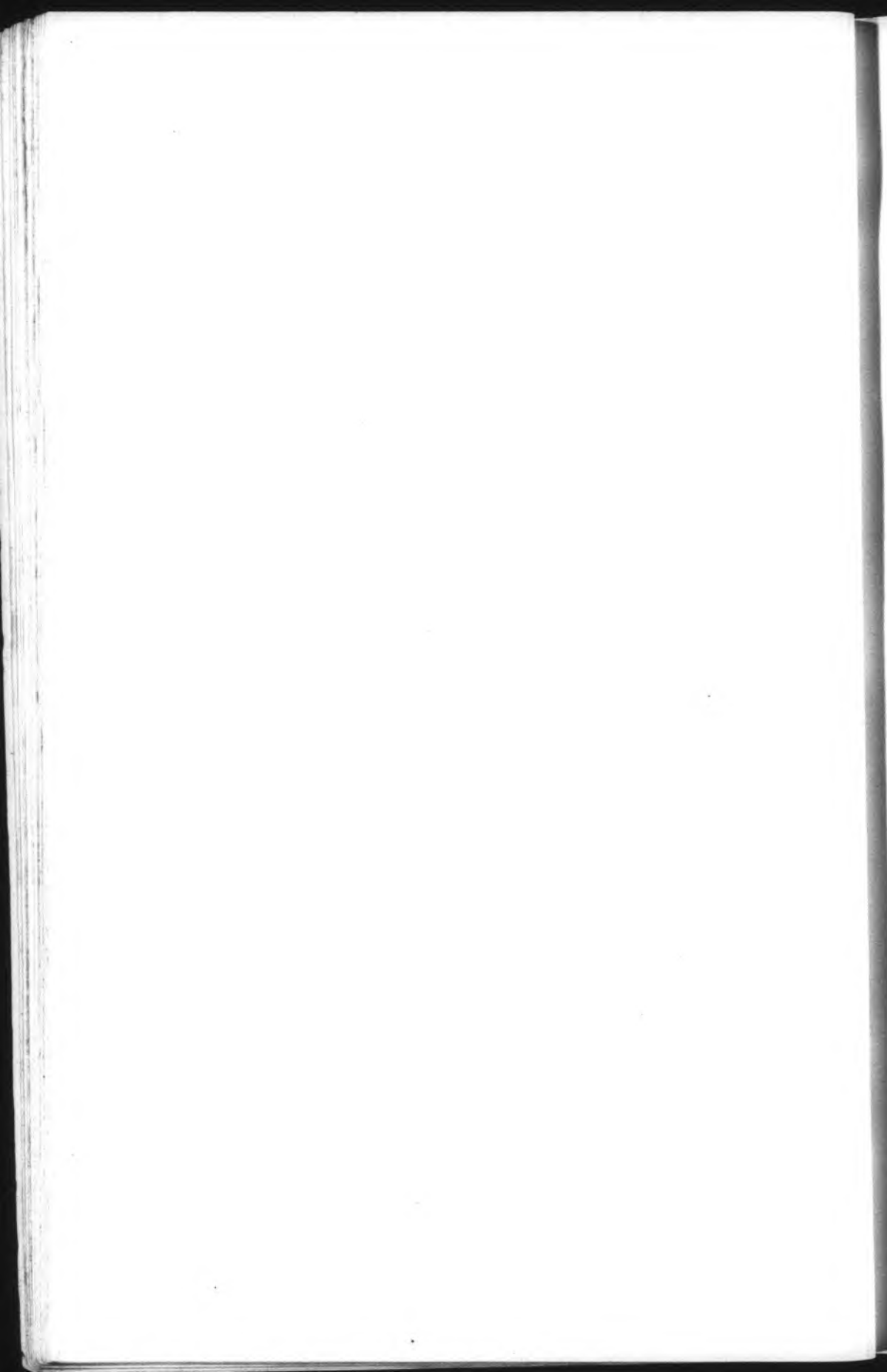
Sec. 5. All laws and parts of laws in conflict herewith be, and are hereby, repealed.

Sec. 6. This Act shall take effect August 1st, A. D. 1923.

Approved June 8, 1923.



Surface-treated Lime Rock Base, built by State Forces in Volusia County, Road No. 3.



## FEDERAL AID LAW

(42 Stat. 212)

An Act To amend the Act entitled "An Act to provide that the United States shall aid the States in the construction of rural post roads, and for other purposes," approved July 11, 1916, as amended and supplemented, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That this Act may be cited as the Federal Highway Act.

Sec. 2. That, when used in this Act, unless the context indicates otherwise—

The term "Federal Aid Act" means the Act entitled "An Act to provide that the United States shall aid the States in the construction of rural post roads, and for other purposes," approved July 11, 1916, as amended by sections 5 and 6 of an Act entitled "An Act making appropriations for the service of the Post Office Department for the fiscal year ending June 30, 1920, and for other purposes," approved February 28, 1919, and all other Acts amendatory thereof or supplementary thereto.

The term "highways" includes rights of way, bridges, drainage structures, signs, guard rails, and protective structures in connection with highways, but shall not include any highway or street in a municipality having a population of two thousand five hundred or more as shown by the last available census, except that portion of any such highway or street along which within a distance of one mile the houses average more than two hundred feet apart.

The term "State highway department" includes any State department, commission, board, or official having adequate powers and suitably equipped and organized to discharge to the satisfaction of the Secretary of Agriculture the duties herein required.

The term "maintenance" means the constant making of needed repairs to preserve a smooth surfaced highway.

The term "construction" means the supervising, inspecting, actual building, and all expenses incidental to the construction of a highway, except locating, surveying, mapping, and costs of rights of way.

The term "reconstruction" means a widening or a rebuilding of the highway or any portion thereof to make it a continuous road, and of sufficient width and strength to care adequately for traffic needs.

The term "forest roads" means roads wholly or partly within or adjacent to and serving the national forests.

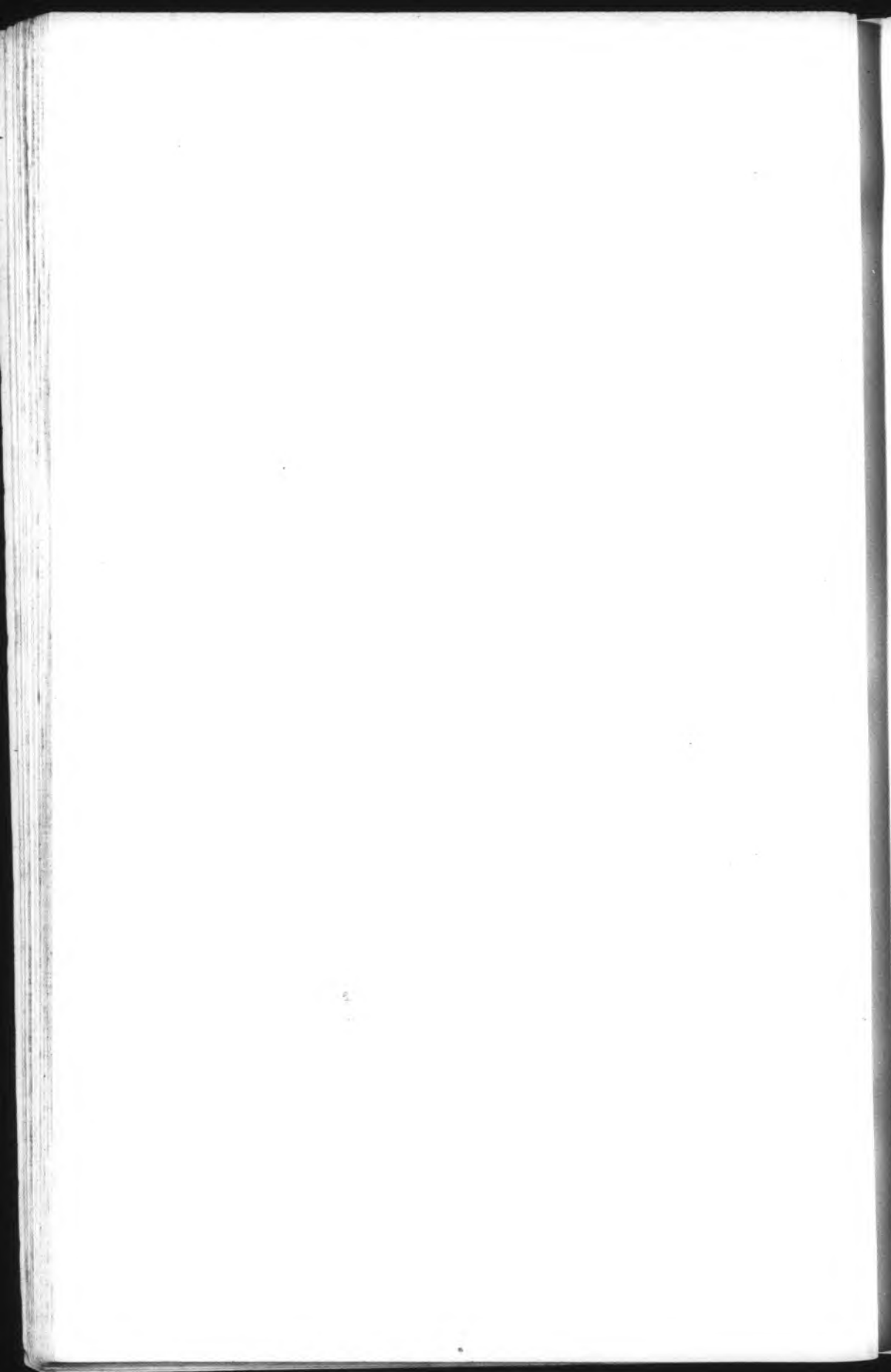
The term "State funds" includes for the purposes of this Act funds raised under the authority of the State, or any political or other subdivision thereof, and made available for expenditure under the direct control of the State highway department.

Sec. 3. All powers and duties of the Council of National Defense under the Act entitled "An Act making appropriations for the support of the Army for the fiscal year ending June 30, 1917, and for other purposes," approved August 29, 1916, in relation to highway or highway transport, are hereby transferred to the Secretary of Agriculture, and the Council of National Defense is directed to turn over to the Secretary of Agriculture the equipment, material, supplies, papers, maps, and documents utilized in the exercise of such powers. The powers and duties of agencies dealing with highways in the national parks or in military or naval reservations under the control of the United States Army or Navy, or with highways used principally for military or naval purposes, shall not be taken over by the Secretary of Agriculture, but such highways shall remain under the control and jurisdiction of such agencies.

The Secretary of Agriculture is authorized to cooperate with the State highway departments, and with the Department of the Interior in the construction of public



Victory Bridge over Apalachicola River, showing Flood Waters, January 22, 1925





highways within Indian reservations, and to pay the amount assumed therefor from the funds allotted or apportioned under this Act to the State wherein the reservation is located.

Sec. 4. That the Secretary of Agriculture shall establish an accounting division which shall devise and install a proper method of keeping the accounts.

Sec. 5. That the Secretary of War be, and he is hereby, authorized and directed to transfer to the Secretary of Agriculture, upon his request, all war material, equipment, and supplies now or hereafter declared surplus from stock now on hand and not needed for the purposes of the War Department but suitable for use in the improvement of highways, and that the same shall be distributed among the highway departments of the several States to be used in the construction, reconstruction, and maintenance of highways, such distribution to be upon the same basis as that hereinafter provided for in this Act in the distribution of Federal-aid fund: *Provided*, That the Secretary of Agriculture, in his discretion, may reserve from such distribution not to exceed 10 per centum of such material, equipment, and supplies for use in the construction, reconstruction, and maintenance of national forest roads or other roads constructed, reconstructed, or maintained under his direct supervision.

Sec. 6. That in approving projects to receive Federal aid under the provisions of this Act the Secretary of Agriculture shall give preference to such projects as will expedite the completion of an adequate and connected system of highways, interstate in character.

Before any projects are approved in any State, such State, through its State highway department, shall select or designate a system of highways not to exceed 7 per centum of the total highway mileage of such State as shown by the records of the State highway department at the time of the passage of this Act.

Upon this system all Federal-aid apportionments shall be expended.

Highways which may receive Federal aid shall be divided into two classes, one of which shall be known as primary or interstate highways, and shall not exceed three-sevenths of the total mileage which may receive Federal aid, and the other which shall connect or correlate therewith and be known as secondary or intercounty highways, and shall consist of the remainder of the mileage which may receive Federal aid.

The Secretary of Agriculture shall have authority to approve in whole or in part the systems as designated or to require modifications or revisions thereof: *Provided*, That the States shall submit to the Secretary of Agriculture for his approval any proposed revisions of the designated systems of highways above provided for.

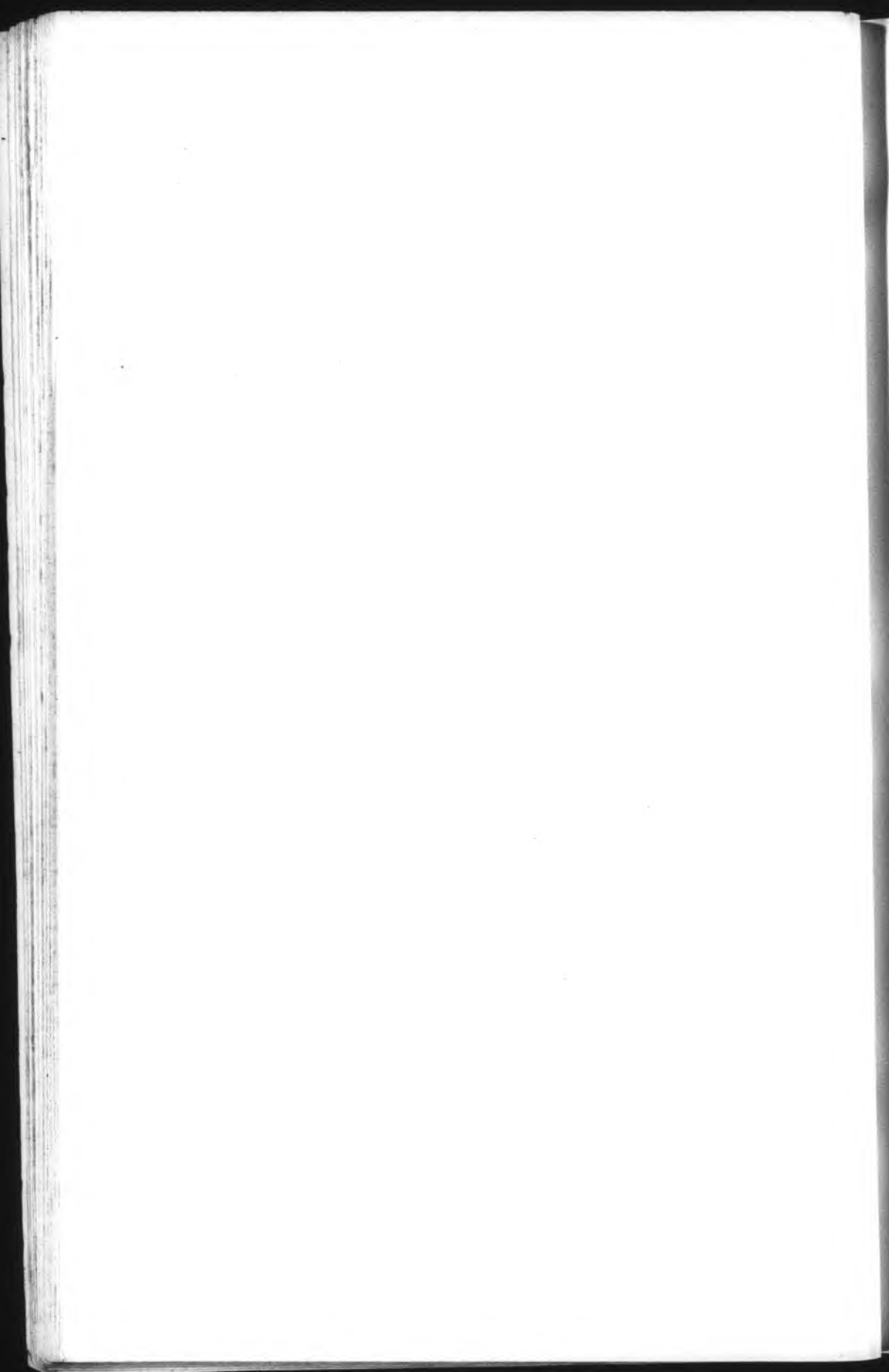
Not more than 60 per centum of all Federal aid allotted to any State shall be expended upon the primary or interstate highways until provision has been made for the improvement of the entire system of such highways: *Provided*, That with the approval of any State highway department the Secretary of Agriculture may approve the expenditure of more than 60 per centum of the Federal aid apportioned to such State upon the primary or interstate highways in such State.

The Secretary of Agriculture may approve projects submitted by the State highway departments prior to the selection, designation, and approval of the system of Federal-aid highways herein provided for if he may reasonably anticipate that such projects will become a part of such system.

Whenever provision has been made by any State for the completion and maintenance of a system of primary or interstate and secondary or intercounty highways equal to 7 per centum of the total mileage of such State, as required by this Act, said State, through its State highway department, by and with the approval of the Secretary of Agri-



Section of Plain Cement Concrete Pavement in St. Lucie County, State Road No. 4, Federal Aid Project No. 36-B.



culture, is hereby authorized to add to the mileage of primary or interstate and secondary or intercounty systems as funds become available for the construction and maintenance of such additional mileage.

Sec. 7. That before any project shall be approved by the Secretary of Agriculture for any State such State shall make provisions for State funds required each year of such States by this Act for construction, reconstruction, and maintenance of Federal-aid highways within the State, which funds shall be under the direct control of the State highway department.

Sec. 8. That only such durable types of surface and kinds of material shall be adopted for the construction and reconstruction of any highway which is a part of the primary or interstate and secondary or intercounty systems as will adequately meet the existing and probable future traffic needs and conditions thereon. The Secretary of Agriculture shall approve the types and width of construction and reconstruction and the character of improvement, repair, and maintenance of each case, consideration being given to the type and character which shall be best suited for each locality and to the probable character and extent of the future traffic.

Sec. 9. That all highways constructed or reconstructed under the provisions of this Act shall be free from tolls of all kinds.

That all highways in the primary or interstate system constructed after the passage of this Act shall have a right of way of ample width and a wearing surface of an adequate width which shall not be less than eighteen feet, unless, in the opinion of the Secretary of Agriculture, it is rendered impracticable by physical conditions, excessive costs, probable traffic requirements, or legal obstacles.

Sec. 10. That when any State shall have met the requirements of this Act, the Secretary of the Treasury, upon receipt of certification from the governor of such State to such effect, approved by the Secretary of Agriculture, shall

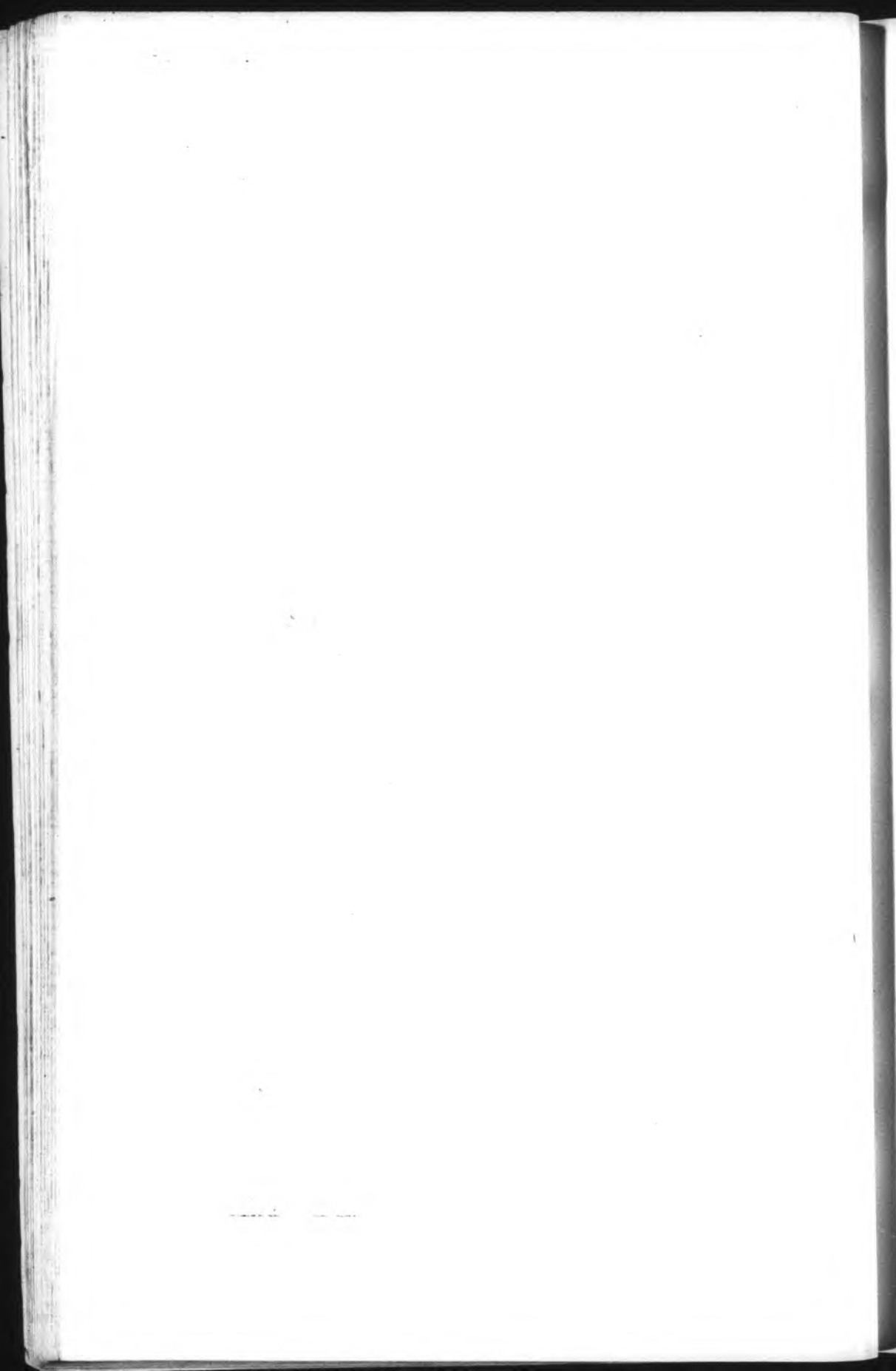
immediately make available to such State, for the purpose set forth in this Act, the sum apportioned to such State as herein provided.

Sec. 11. That any State having complied with the provisions of this Act, and desiring to avail itself of the benefits thereof, shall by its State highway department submit to the Secretary of Agriculture project statements setting forth proposed construction or reconstruction of any primary or interstate, or secondary or intercounty highway therein. If the Secretary of Agriculture approve the project, the State highway department shall furnish to him such surveys, plans, specifications, and estimates therefor as he may require; items included for engineering, inspection, and unforeseen contingencies shall not exceed 10 per centum of the total estimated costs of its construction.

That when the Secretary of Agriculture approves such surveys, plans, specifications, and estimates, he shall notify the State highway department and immediately certify the fact to the Secretary of the Treasury. The Secretary of the Treasury shall thereupon set aside the share of the United States payable under this Act on account of such projects, which shall not exceed 50 per centum of the total estimated cost thereof, except that in the case of any State containing unappropriated public lands exceeding 5 per centum of the total area of all lands in the State, the share of the United States payable under this Act on account of such projects shall not exceed 50 per centum of the total estimated cost thereof plus a percentage of such estimated cost equal to one-half of the percentage which the area of the unappropriated public lands in such State bears to the total area of such State: *Provided*, That the limitation of payments not to exceed \$20,000 per mile, under existing law, which the Secretary of Agriculture may make be, and the same is hereby, increased in proportion to the increased percentage of Federal aid authorized by this section: *Provided further*, That these provisions relative to the public land States shall apply to all unobligated or unmatched



Federal Aid Project 37-E, Road 2, Alachua County near Miconopy. Sheet Asphalt on Lime-Rock Base.





funds appropriated by the Federal Aid Act and payment for approved projects upon which actual building construction work had not begun on the 30th day of June, 1921.

Sec. 12. That the construction and reconstruction of the highways or parts of highways under the provisions of this Act, and all contracts, plans, specifications, and estimates relating thereto, shall be undertaken by the State highway departments subject to the approval of the Secretary of Agriculture. The construction and reconstruction work and labor in each State shall be done in accordance with its laws and under the direct supervision of the State highway department, subject to the inspection and approval of the Secretary of Agriculture and in accordance with the rules and regulations pursuant to this Act.

Sec. 13. That when the Secretary of Agriculture shall find that any project approved by him has been constructed or reconstructed in compliance with said plans and specifications, he shall cause to be paid to the proper authorities of said State the amount set aside for said project.

That the Secretary of Agriculture may, in his discretion, from time to time, make payments on such construction or reconstruction as the work progresses, but these payments, including previous payments, if any, shall not be more than the United States pro rata part of the value of the labor and materials which have been actually put into such construction or reconstruction in conformity to said plans and specifications. The Secretary of Agriculture and the State highway department of each State may jointly determine at what time and in what amounts payments as work progresses shall be made under this Act.

Such payments shall be made by the Secretary of the Treasury, on warrants drawn by the Secretary of Agriculture, to such official or officials or depository as may be designated by the State highway department and authorized under the laws of the State to receive public funds of the State.

Sec. 14. That should any State fail to maintain any highway within its boundaries after construction or reconstruction under the provisions of this Act, the Secretary of Agriculture shall then serve notice upon the State highway department of that fact, and if within ninety days after receipt of such notice said highway has not been placed in proper condition of maintenance, the Secretary of Agriculture shall proceed immediately to have such highway placed in a proper condition of maintenance and charge the cost thereof against the Federal funds allotted to such State, and shall refuse to approve any other project in such State, except as hereinafter provided.

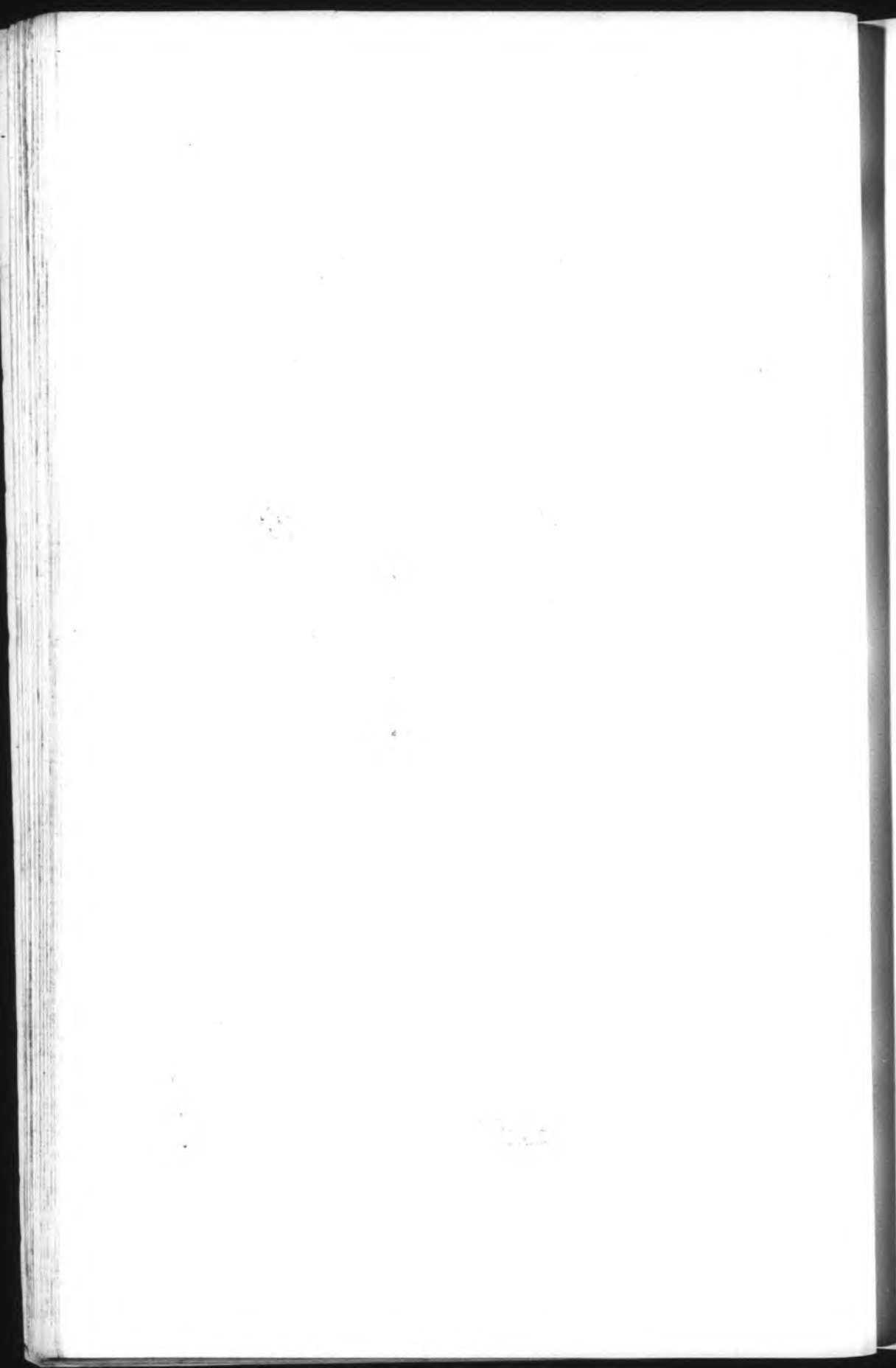
Upon the reimbursement by the State of the amount expended by the Federal Government for such maintenance, said amount shall be paid into the Federal highway fund for reapportionment among all the States for the construction of roads under this Act, and the Secretary of Agriculture shall then approve further projects submitted by the State as in this Act provided.

Whenever it shall become necessary for the Secretary of Agriculture under the provisions of this Act to place any highway in proper condition of maintenance the Secretary of Agriculture shall contract with some responsible party or parties for doing such work: *Provided, however,* That in case he is not able to secure a satisfactory contract he may purchase, lease, hire, or otherwise obtain all necessary supplies, equipment, and labor, and may operate and maintain such motor and other equipment and facilities as in his judgment are necessary for the proper and efficient performance of his functions.

Sec. 15. That within two years after this Act takes effect the Secretary of Agriculture shall prepare, publish, and distribute a map showing the highways and forest roads that have been selected and approved as a part of the primary or interstate, and the secondary or intercounty systems, and at least annually thereafter shall publish sup-



Surface-Treated Lime Rock Base on Road No. 2, in Marion County.



plementary maps showing his program and the progress made in selection, construction, and reconstruction.

Sec. 16. That for the purpose of this Act the consent of the United States is hereby given to any railroad or canal to convey to the highway department of any State any part of its right of way or other property in that State acquired by grant from the United States.

Sec. 17. That if the Secretary of Agriculture determines that any part of the public lands or reservations of the United States is reasonably necessary for the right of way of any highway or forest road or as a source of materials for the construction or maintenance of any such highway or forest road adjacent to such lands or reservations, the Secretary of Agriculture shall file with the Secretary of the department supervising the administration of such land or reservation a map showing the portion of such lands or reservations which it is desired to appropriate.

If within a period of four months after such filing the said Secretary shall not have certified to the Secretary of Agriculture that the proposed appropriation of such land or material is contrary to the public interest or inconsistent with the purposes for which such land or materials have been reserved, or shall have agreed to the appropriation and transfer under conditions which he deems necessary for the adequate protection and utilization of the reserve, then such land and materials may be appropriated and transferred to the State highway department for such purposes and subject to the conditions so specified.

If at any time the need for any such lands or materials for such purposes shall no longer exist, notice of the fact shall be given by the State highway department to the Secretary of Agriculture, and such lands or materials shall immediately revert to the control of the Secretary of the department from which they had been appropriated.

Sec. 18. That the Secretary of Agriculture shall prescribe and promulgate all needful rules and regulations for carrying out of the provisions of this Act, including such

recommendations to the Congress and the State highway departments as he may deem necessary for preserving and protecting the highways and insuring the safety of traffic thereon.

Sec. 19. That on or before the first Monday in December of each year the Secretary of Agriculture shall make a report to Congress, which shall include a detailed statement of the work done, the status of each project undertaken, the allocation of appropriations, an itemized statement of the expenditures and receipts during the preceding fiscal year under this Act, an itemized statement of the traveling and other expenses, including a list of employees, their duties, salaries, and traveling expenses, if any, and his recommendation, if any, for new legislation amending or supplementing this Act. The Secretary of Agriculture shall also make such special reports as Congress may request.

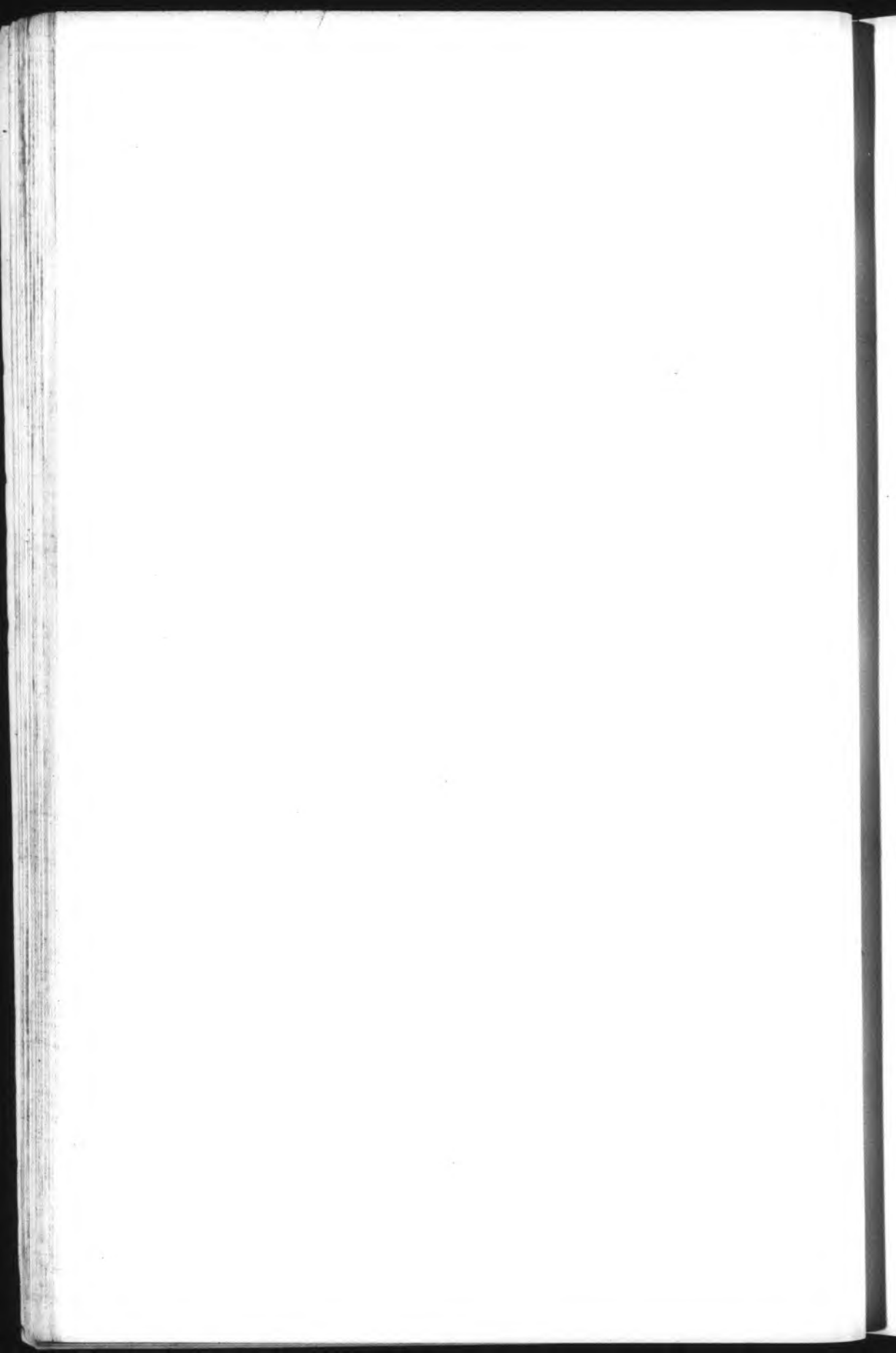
Sec. 20. That for the purpose of carrying out the provisions of this Act there is hereby appropriated, out of the moneys in the Treasury not otherwise appropriated, \$75,000,000 for the fiscal year ending June 30, 1922, \$25,000,000 of which shall become immediately available, and \$50,000,000 of which shall become available January 1, 1922.

Sec. 21. That so much, not to exceed  $2\frac{1}{2}$  per centum, of all moneys hereby or hereafter appropriated for expenditure under the provisions of this Act, as the Secretary of Agriculture may deem necessary for administering the provisions of this Act and for carrying on necessary highway research and investigational studies independently or in cooperation with the State highway departments and other research agencies, and for publishing the results thereof, shall be deducted for such purposes, available until expended.

Within sixty days after the close of each fiscal year the Secretary of Agriculture shall determine what part, if any, of the sums theretofore deducted for such purposes will not be needed and apportion such part, if any, for the fiscal



Bituminous Macadam, State Project No. 570, Road No. 5.





year then current in the same manner and on the same basis as are other amounts authorized by this Act apportioned among all the States, and shall certify such apportionment to the Secretary of the Treasury and to the State highway departments.

The Secretary of Agriculture, after making the deduction authorized by this section, shall apportion the remainder of the appropriation made for expenditure under the provision of the Act for the fiscal year among the several States in the following manner: One-third in the ratio which the area of each State bears to the total area of all the States; one-third in the ratio which the population of each State bears to the total population of all the States as shown by the latest available Federal census; one-third in the ratio which the mileage of rural delivery routes and star routes in each State bears to the total mileage of rural delivery and star routes in all the States at the close of the next preceding fiscal year, as shown by certificate of the Postmaster General, which he is directed to make and furnish annually to the Secretary of Agriculture: *Provided*, That no State shall receive less than one-half of 1 per centum of each year's allotment. All moneys herein or hereafter appropriated for expenditure under the provisions of this Act shall be available until the close of the second succeeding fiscal year for which apportionment was made: *Provided further*, That any sums apportioned to any State under the provisions of the Act entitled "An Act to provide that the United States shall aid the States in the construction of rural post roads, and other purposes," approved July 11, 1916, and all Acts amendatory thereof and supplemental thereto, shall be available for expenditure in that State for the purpose set forth in such Acts until two years after the close of the respective fiscal years for which any such sums become available, and any amount so apportioned remaining unexpended at the end of the period during which it is available for expenditure under the terms of such Acts shall be reapportioned according to the pro-

visions of the Act entitled "An Act to provide that the United States shall aid the States in the construction of rural post roads, and for other purposes," approved July 11, 1916: *And provided further*, That any amount apportioned under the provisions of this Act unexpended at the end of the period during which it is available for expenditure under the terms of this section shall be reapportioned within sixty days thereafter to all the States in the same manner and on the same basis, and certified to the Secretary of the Treasury and the State highway departments in the same way as if it were being apportioned under this Act for the first time.

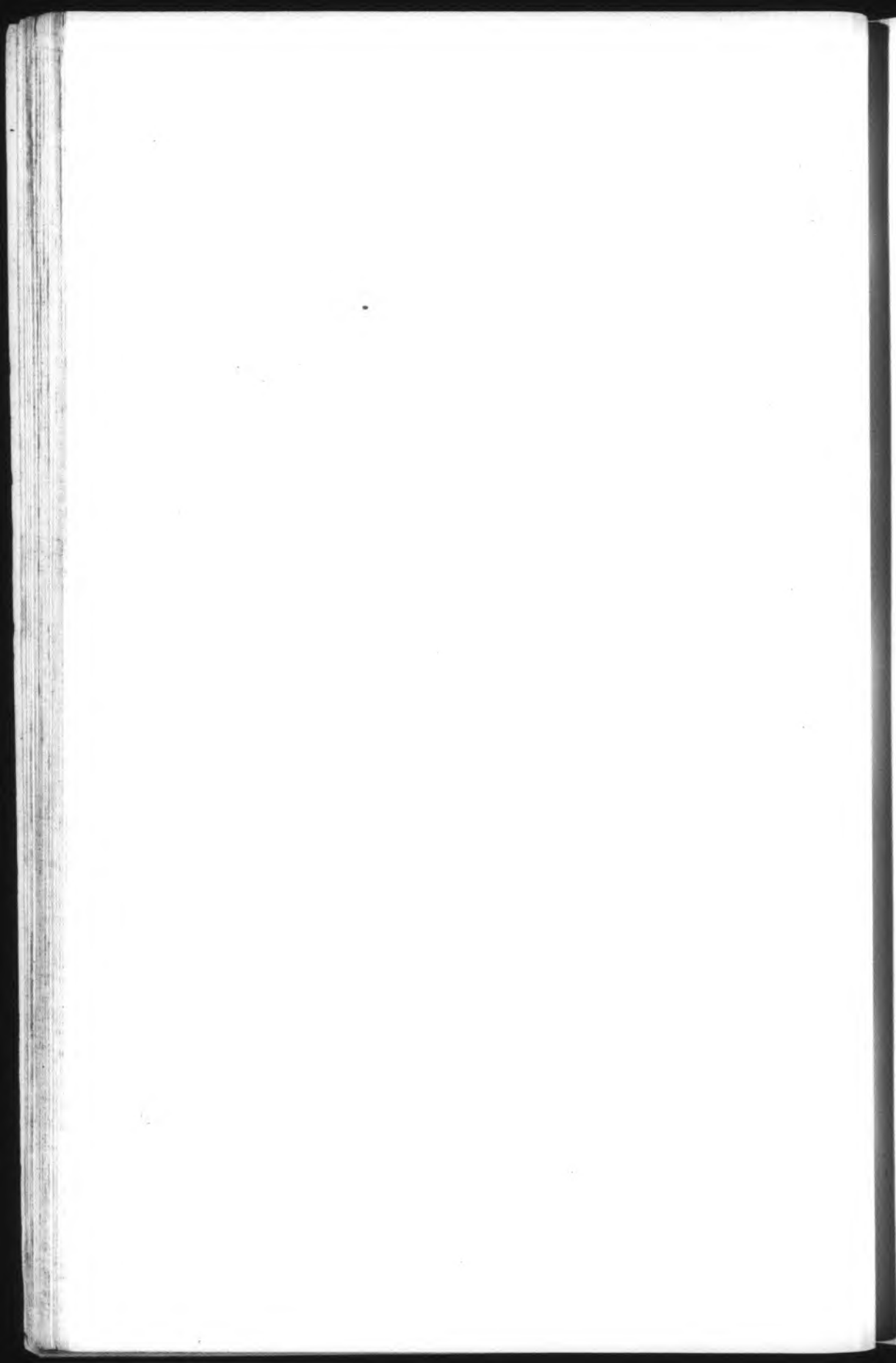
Sec. 22. That within sixty days after the approval of this Act the Secretary of Agriculture shall certify to the Secretary of the Treasury and to each of the State highway departments the sum he has estimated to be deducted for administering the provisions of this Act and the sums which he has apportioned to each State for the fiscal year ending June 30, 1922, and on or before January 20 next preceding the commencement of each succeeding fiscal year, and shall make like certificates for each fiscal year.

Sec. 23. That out of the moneys in the Treasury not otherwise appropriated, there is hereby appropriated for the survey, construction, reconstruction, and maintenance of forest roads and trails, the sum of \$5,000,000 for the fiscal year ending June 30, 1922, available immediately and until expended, and \$10,000,000 for the fiscal year ending June 30, 1923, available until expended.

(a) Fifty per centum, but not to exceed \$3,000,000 for any one fiscal year, of the appropriation made or that may hereafter be made for expenditure under the provisions of this section shall be expended under the direct supervision of the Secretary of Agriculture in the survey, construction, reconstruction, and maintenance of roads and trails of primary importance for the protection, administration, and utilization of the national forests, or when necessary, for the use and development of the resources upon which com-



Sheet Asphalt on Lime Rock Base, Federal Aid Project No. 37.



munities within or adjacent to the national forests are dependent, and shall be apportioned among the several States, Alaska, and Porto Rico by the Secretary of Agriculture, according to the relative needs of the various national forests, taking into consideration the existing transportation facilities, value of timber, or other resources served, relative fire danger, and comparative difficulties of road and trail construction.

The balance of such appropriations shall be expended by the Secretary of Agriculture in the survey, construction, reconstruction, and maintenance of forest roads of primary importance to the State, counties, or communities within, adjoining, or adjacent to the national forests, and shall be prorated and apportioned by the Secretary of Agriculture for expenditures in the several States, Alaska, and Porto Rico, according to the area and value of the land owned by the Government within the national forests therein as determined by the Secretary of Agriculture from such information, investigation, sources, and departments as the Secretary of Agriculture may deem most accurate.

(b) Cooperation of Territories, States, and civil subdivisions thereof may be accepted but shall not be required by the Secretary of Agriculture.

(c) The Secretary of Agriculture may enter into contracts with any Territory, State, or civil subdivision thereof for the construction, reconstruction, or maintenance of any forest road or trail or part thereof.

(d) Construction work on forest roads or trails estimated to cost \$5,000 or more per mile, exclusive of bridges, shall be advertised and let to contract.

If such estimated cost is less than \$5,000 per mile, or if, after proper advertising, no acceptable bid is received, or the bids are deemed excessive, the work may be done by the Secretary of Agriculture on his own account; and for such purpose the Secretary of Agriculture may purchase, lease, hire, rent, or otherwise obtain all necessary supplies,

materials, tools, equipment, and facilities required to perform the work.

The appropriation made in this section or that may hereafter be made for expenditure under the provisions of this section may be expended for the purpose herein authorized and for the payment of wages, salaries, and other expenses for help employed in connection with such work.

Sec. 24. That in any State where the existing constitution or laws will not permit the State to provide revenues for the construction, reconstruction, or maintenance of highways, the Secretary of Agriculture shall continue to approve projects for said State until three years after the passage of this Act, if he shall find that said State has complied with the provisions of this Act in so far as its existing constitution and laws will permit.

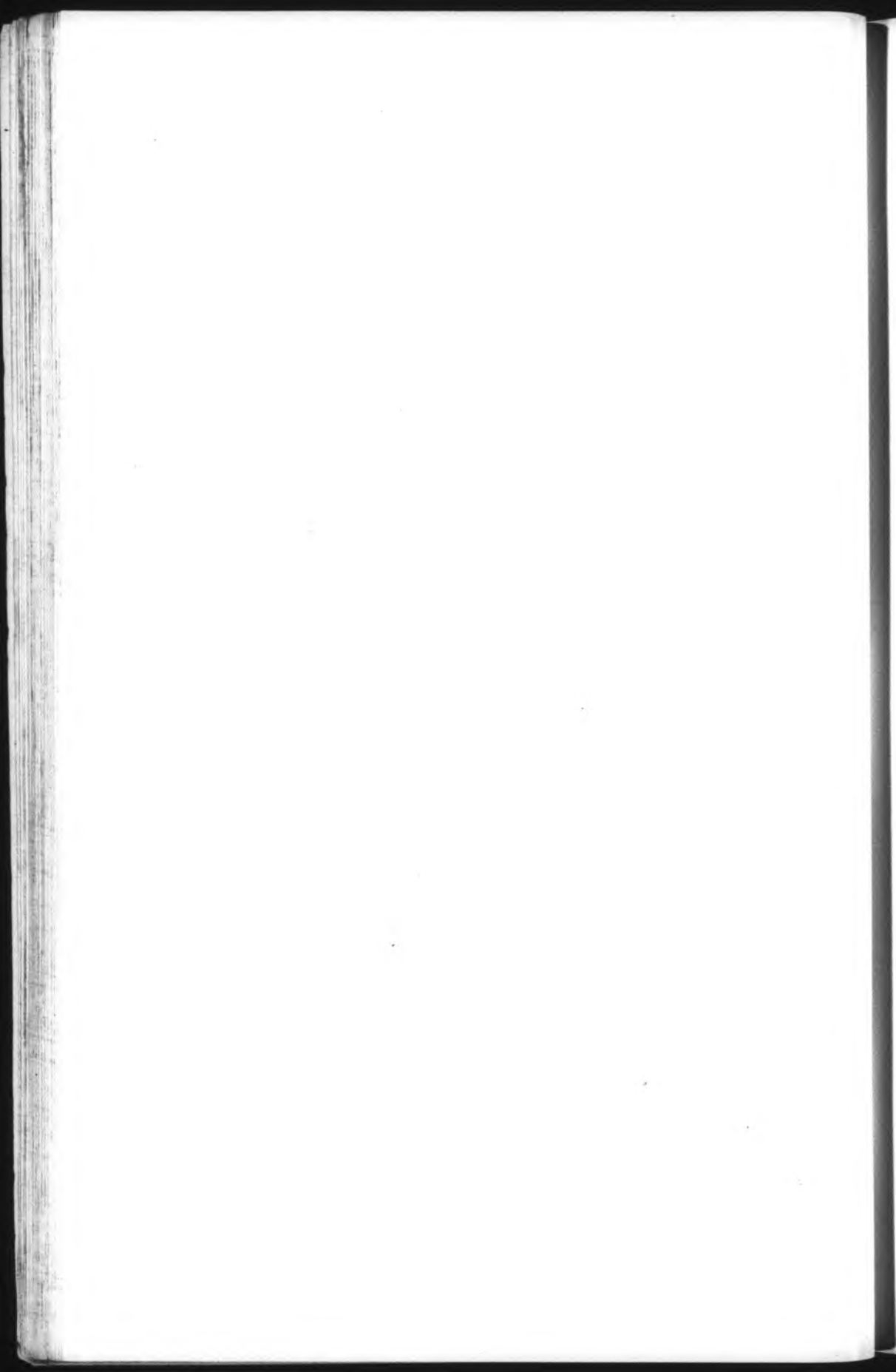
Sec. 25. That if any provision of this Act, or the application thereof to any person or circumstances, shall be held invalid, the validity of the remainder of the Act and of the application of such provision to other persons or circumstances shall not be affected thereby.

Sec. 26. That all Acts or parts of Acts in any way inconsistent with the provisions of this Act are hereby repealed, and this Act shall take effect on its passage.

Approved November 9, 1921.



A Typical Sand-Clay Road in West Florida.





## PUBLIC—NO. 244—67TH CONGRESS

(H. R. 9859)

An Act Making appropriations for the Post Office Department for the fiscal year ending June 30, 1923, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

\* \* \* \* \*

Sec. 4. That for the purpose of carrying out the provisions of the Act entitled "An Act to provide that the United States shall aid the States in the construction of rural post roads, and for other purposes," approved June 11, 1916, and all Acts amendatory thereof and supplementary thereto, there is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, the following additional sums, all such sums to be expended in accordance with the provisions of such Act:

The sum of \$50,000,000 for the fiscal year ending June 30, 1923.

The sum of \$65,000,000 for the fiscal year ending June 30, 1924.

The sum of \$75,000,000 for the fiscal year ending June 30, 1925.

The Secretary of Agriculture is hereby authorized, immediately upon the passage of this Act, to apportion the \$50,000,000 herein authorized to be appropriated for the fiscal year ending June 30, 1923, among the several States as provided in section 21 of the Federal Highway Act approved November 9, 1921: *Provided*, That the Secretary of Agriculture shall act upon projects submitted to him under his apportionment of this authorization and his approval of any such project shall be deemed a contractual obligation of the Federal Government for the payment of its proportional contribution thereto.

Par. 2. For the purpose of carrying out the provisions of section 23 of the Federal Highway Act, approved November 9, 1921, there is hereby authorized to be appropriated for forest roads and trails, out of any money in the Treasury not otherwise appropriated, the following additional sums, to be available until expended, in accordance with the provisions of said section 23:

The sum of \$6,500,000 for the fiscal year ending June 30, 1924.

The sum of \$6,500,000 for the fiscal year ending June 30, 1925.

Pa. 3. For the purposes of this section and of the Acts heretofore making appropriations to aid the States in the construction of rural post roads the term "bridges" includes railroad grade separations, whether by means of overhead or underpass crossings.

Par. 4. The provision of section 5 of the Act entitled "An Act making appropriations for the service of the Post Office Department for the fiscal year ending June 30, 1920, and for other purposes," approved February 28, 1919, fixing the limitation of \$20,000 per mile which the Secretary of Agriculture may make, is hereby amended to read as follows:

"That the payments which the Secretary of Agriculture may make from sums appropriated under this Act or any Act amendatory thereof or supplementary thereto for the fiscal year ending June 30, 1923, shall not exceed \$16,250 per mile exclusive of the cost of bridges of more than twenty feet of clear span; and that the payments which the Secretary of Agriculture may make from any sums appropriated under the provisions of this Act or any Act amendatory thereof or supplementary thereto, after the fiscal year ending June 30, 1923, shall not exceed \$15,000 per mile exclusive of the cost of bridges of more than twenty feet of clear span: *Provided*, That the limitation of payments herein provided shall apply to the public-land States, except that the same is hereby increased in propor-



Bituminous Macadam Pavement, Federal Aid Project No. 32, Built with State Forces.

7

tion to the increased percentage of Federal aid authorized by section 11 of the Act entitled 'An Act to amend the Act entitled "An Act to provide that the United States shall aid the States in the construction of rural post roads, and for other purposes," ' approved November 9, 1921.'

Par. 5. Section 24 of the Act entitled "An Act to amend the Act entitled 'An Act to provide that the United States shall aid the States in the construction of rural post roads, and for other purposes,' " approved November 9, 1921, is amended to read as follows: "That in any State where the existing constitution or laws will not permit the State to provide revenues for the construction, reconstruction, or maintenance of highways, the Secretary of Agriculture shall continue to approve projects for said State until five years after November 9, 1921, if he shall find that said State has complied with the provisions of this Act in so far as its existing constitution and laws will permit."

Par. 6. If any officer, agent, or employee of the United States, or any officer, agent, or employee of any State or Territory, or any person, association, firm, or corporation or any officer or agent of any person, association, firm, or corporation shall knowingly make any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the costs thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction of any project submitted for approval to the Secretary of Agriculture under the provisions of the Federal Highway Act, or shall knowingly make any false statement, false representation, or false report or claim for work or materials for the construction of any project approved by the Secretary of Agriculture under said Federal Highway Act and all amendments thereto, or shall knowingly make any false statement or false representation in any report required to be made under said Federal Highway Act or Acts supplementary thereto with the intent to de-

fraud the United States shall, upon conviction thereof, be punished by imprisonment not to exceed five years or by a fine not to exceed \$10,000, or by both fine and imprisonment within said limits.

Par. 7. If any provision of this section, or the application thereof to any person or circumstances, shall be held invalid, the validity of the remainder of the section and the application of such provision to other persons or circumstances shall not be affected thereby.

Par. 8. All Acts or parts of Acts in any way inconsistent with the provisions of this section are hereby repealed.

\* \* \* \* \*

Approved June 19, 1922.

# RULES AND REGULATIONS OF THE SECRETARY OF AGRICULTURE FOR CARRYING OUT THE FEDERAL HIGHWAY ACT (EXCEPT THE PRO- VISIONS THEREOF RELATIVE TO FOREST ROADS).

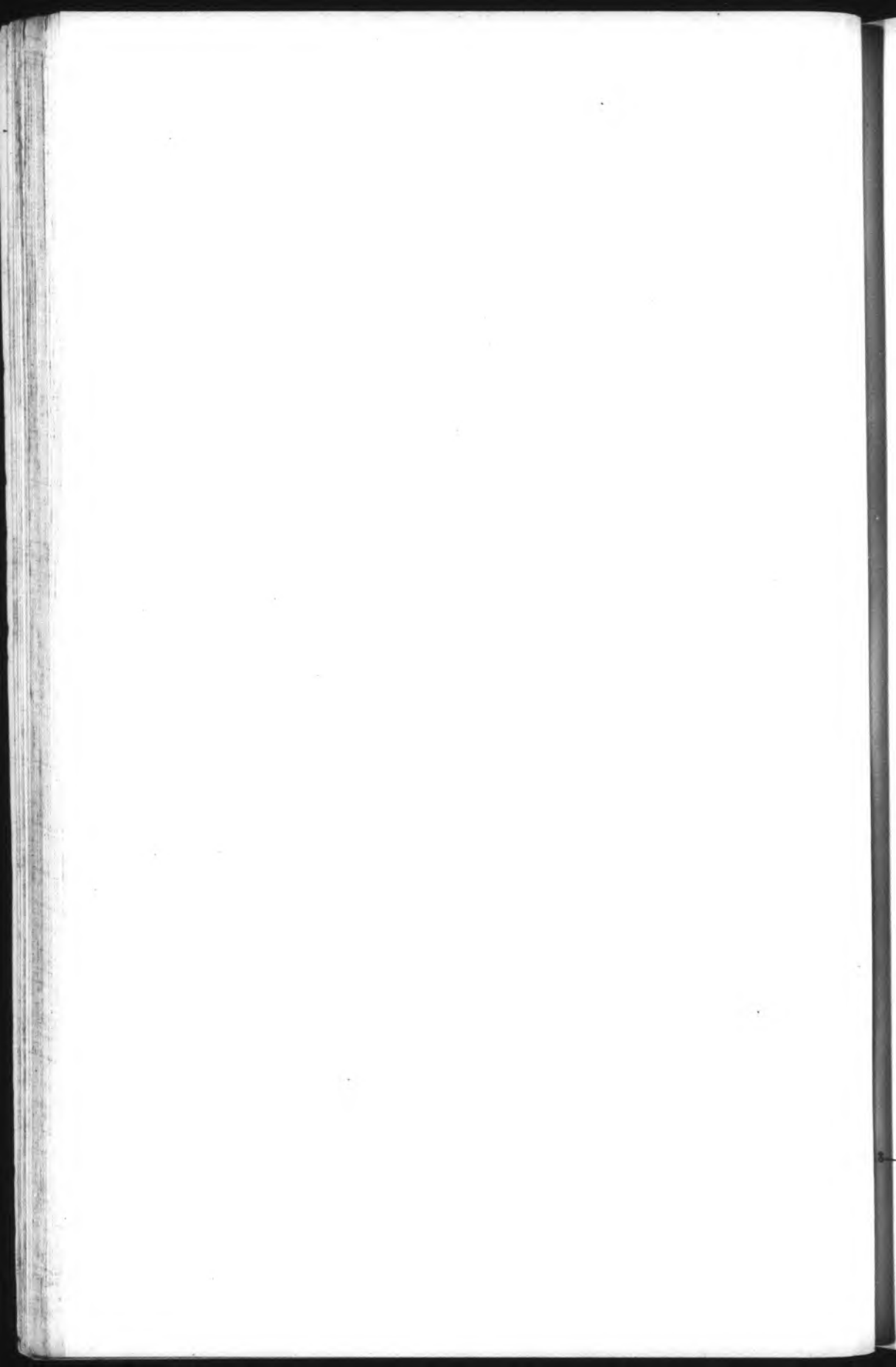
## REGULATION 1.—DEFINITIONS

Section 1. For the purposes of these regulations, the following terms shall be construed, respectively, to mean:

*Act.*—The act of Congress approved July 11, 1916, entitled "An act to provide that the United States shall aid the States in the construction of rural post roads, and for other purposes" (30 Stat. 355), as amended by the act of Congress approved February 28, 1919, entitled "An act making appropriations for the service of the Post Office Department for the fiscal year ending June 30, 1920, and for other purposes" (40 Stat. 1200, 1201), and as amended by the act of Congress approved November 9, 1921, entitled "An act to amend the act entitled 'An act to provide that the United States shall aid the States in the construction of rural post roads, and for other purposes,' approved July 11, 1916, as amended and supplemented, and for other purposes" (Public, No. 87, 67th Cong.).



Bituminous Macadam Surface on Lime Rock Base, Federal Aid Project No. 33, Road No. 2, Alachua County.





*Secretary.*—The Secretary of Agriculture of the United States.

*Bureau of Public Roads.*—The Bureau of Public Roads of the United States Department of Agriculture.

*Authorized representatives of the Secretary.*—The Chief of the Bureau of Public Roads and such other officials and employees thereof as he may designate from time to time.

*Federal aid highway system.*—The system of Federal aid highways, established by actual agreement and joint action of the States and the Secretary of Agriculture, and upon which all Federal aid funds shall be spent.

*Primary highways.*—The primary or interstate portion of the Federal aid highway system composed of not to exceed three-sevenths thereof.

*Secondary highways.*—The secondary or intercounty portion of the Federal aid highway system consisting of at least four-sevenths thereof.

*Ten per cent fund.*—Items for engineering, inspection, and unforeseen contingencies not exceeding 10 per cent of the total estimated cost of the construction.

## REGULATION 2.—APPLICATION OF REGULATIONS

Section 1. These regulations apply to all provisions of the act, except the provisions thereof relative to forest roads and trails, unless hereafter so made applicable by order of the Secretary.

Sec. 2. These regulations shall apply as fully where the extent to which the State may engage in road construction and maintenance work, or raise State revenues therefor, is limited by its existing constitution and laws as in any other case.

## REGULATION 3.—INFORMATION FOR THE SECRETARY

Section 1. Before any agreement is made upon any road or roads to be constructed in a State, or as to the character and method of construction, there shall be furnished the

Secretary upon his request, by or on behalf of the State, general information as to its laws affecting roads and the authority of the State and local officials in reference to the construction and maintenance of roads; as to the State highway department, how equipped and organized; as to the existing provisions of its constitution or laws relative to State revenues for the construction, reconstruction, or maintenance of roads; as to funds that will be available to meet the State's share of the cost of the construction work to be performed and the general source of such funds; and as to provisions made, or to be made, for maintaining roads upon which Federal aid funds will be expended.

Sec. 2. Information requested by the Secretary or his authorized representatives relating to the maintenance of roads constructed under the provisions of the act shall be furnished, from time to time, by the State highway departments, on forms supplied by the Bureau of Public Roads.

Sec. 3. Data furnished by or on behalf of a State shall be supplemented by such reports of the Bureau of Public Roads as the Secretary may from time to time require.

#### REGULATION 4.—FEDERAL AID HIGHWAY SYSTEM MAP

Section 1. Each State highway department shall file with the Secretary of Agriculture a State map showing the proposed Federal aid highway system and indicating the primary and the secondary portions thereof, in such form and with such information as he may require.

Sec. 2. The Secretary, through his authorized representatives, will make an examination of the proposed system and will from time to time notify the State highway department of the acceptability of the parts of the system examined.

Sec. 3. When agreement has been reached between the State highway department and the Secretary as to the whole (or if the State so desires, of a material portion) of the Federal aid highway system, the State shall make for-



Lime Rock Base, surface-treated, showing appearance before opened for travel.



mal request for the approval of the Secretary of Agriculture. This request will be accompanied by a State map showing the full proposed Federal aid highway system with the primary and secondary highways upon which formal approval is requested, in such form and with such information as may be prescribed by the Secretary or his authorized representatives.

Sec. 4. Pending the formal approval of the State highway system in whole or in part by the Secretary of Agriculture, only such projects will be approved as are on routes indicated on the proposed Federal aid highway system as submitted under section 1 and tentatively accepted by the Secretary under section 2 of this regulation: *Provided*, That the Secretary of Agriculture may approve project statements submitted by the State highway departments prior to the selection, designation, and approval of the system of Federal aid highways herein provided for if he may reasonably anticipate that the projects will become a part of such system.

#### REGULATION 5.—PROJECT STATEMENTS

Section 1. A project statement may be submitted for the whole or any part of a continuous route or routes embraced in the Federal aid highway system selected or designated in accordance with the provisions of the act, preference being given to such projects as will expedite the completion of a system of highways interstate in character.

Sec. 2. Prior to the selection, designation, and approval of the Federal aid highway system, project statements may be submitted for any route or part of a route if the Secretary may reasonably anticipate that such route will become a part of such system. After the Federal aid highway system shall have been selected, designated, and approved no project statements shall be submitted for any route or part of a route not embraced in the system so selected, designated, and approved.

Sec. 3. A project statement shall contain such information as the Secretary may require to be submitted on a form supplied by the Bureau of Public Roads and shall be accompanied by a sketch map in sufficient detail and covering such length of road as may be necessary to determine the fitness of the location as a part of the Federal aid highway system and with the termini of the proposed improvement indicated thereon.

REGULATION 6.—SURVEYS, PLANS, SPECIFICATIONS, AND  
ESTIMATES

Section 1. The surveys, plans, specifications and estimates shall show in convenient form and detail the work to be performed, and the probable cost thereof, all in conformity with the standards, governing form, and arrangement prescribed by the Secretary.

Sec. 2. Copies of the specifications shall be submitted with the plans and estimates, except that where standard specifications have been approved by the Chief of the Bureau of Public Roads a statement to the effect that approved standard specifications govern may be submitted in lieu of the printed documents.

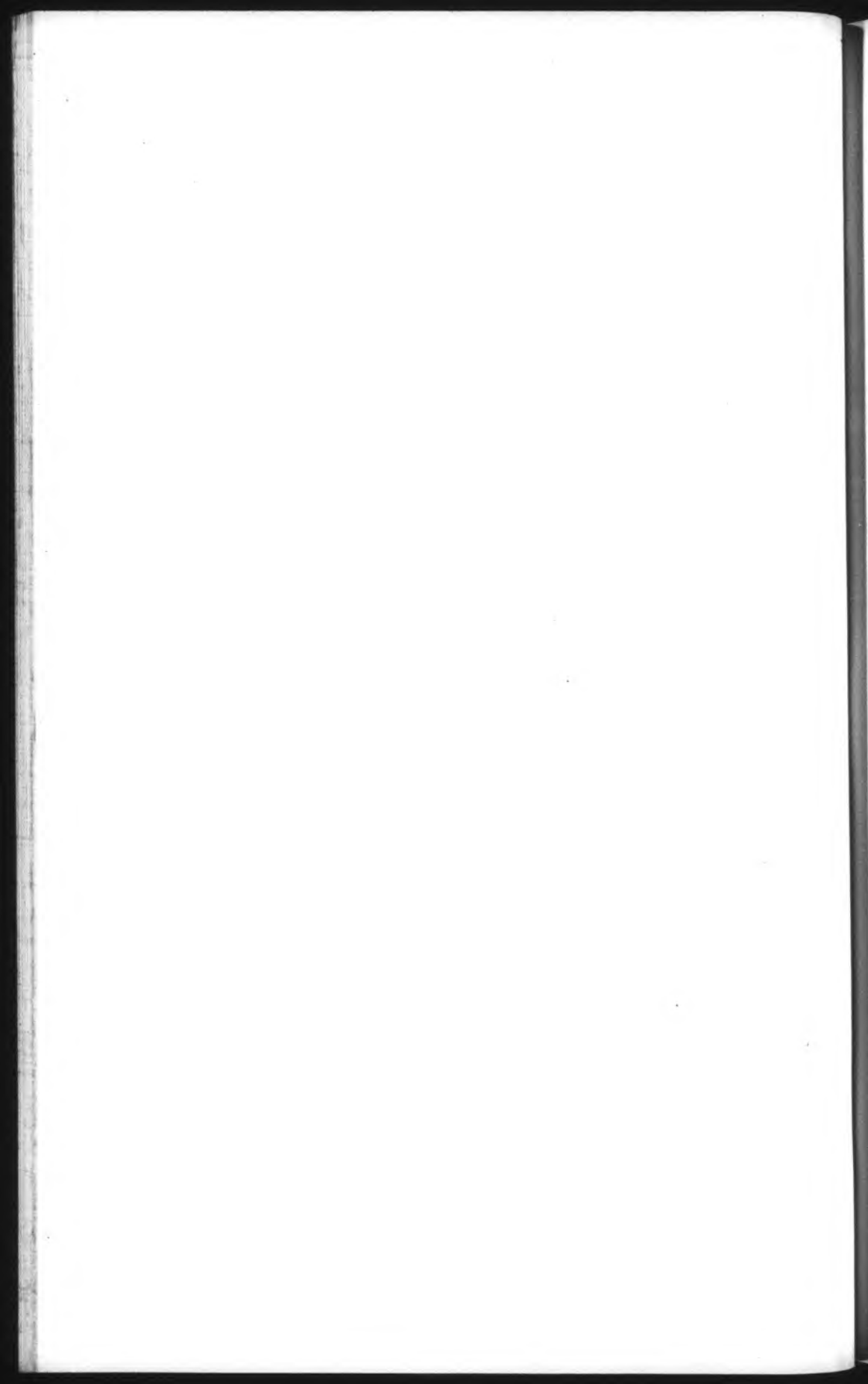
Sec. 3. Until plans, specifications, and estimates for a project or part thereof have been submitted and found satisfactory for recommendation, and the State has been so notified by the district engineer of the Bureau of Public Roads, no project or part thereof shall be let to contract.

Sec. 4. The estimate for each project shall show the estimated quantity and the estimated cost of each item of construction in detail and, separately, the 10 per cent fund, and shall not include any expense for advertising.

Sec. 5. Unless State standard contract and bond forms have been approved there shall be submitted with each set of plans for the approval of the Secretary copies of the form of contract together with all documents referred to therein or made a part thereof, and of the contractor's



Bituminous Macadam, Federal Aid Project No. 17, Road No. 5, Manatee County.





bond which it is proposed to use on the project. No alteration of either of these forms, when once approved, shall be made until it is approved by the Secretary.

Sec. 6. Where any part of the cost of a project is to be furnished by a county or other local subdivision or subdivisions of a State, the plans, specifications, and estimates shall be accompanied by certified copy of each resolution or order, if any, of the appropriate local officials, or such other showing as the Secretary may require respecting the funds which are made available, or respecting the supervision of the construction of the road and of the control of the money provided for paying such cost.

Sec. 7. Right of way ample for any project shall be provided and no incidental damages to adjoining property, due to construction work paid for by or on behalf of the State, shall be included in the estimate or be paid in any part, directly or indirectly, by the Federal Government.

Sec. 8. Grade crossings occurring on the Federal aid highway system shall be classified for priority of improvement by agreement between the State highway departments and the Bureau of Public Roads.

Sec. 9. No part of the expense of making surveys, plans, specifications, or estimates, by or on behalf of the State prior to the beginning of construction work, shall be included in the estimate or paid by the Federal Government.

Sec. 10. Subsequent to the execution of the agreement no change which will increase the cost of a project to the Federal Government shall be made, except upon approval by the Secretary of Agriculture, and no changes shall be made in the termini or type, except upon approval of the Chief of the Bureau of Public Roads, but minor alterations which do not affect the general nature of the improvement or increase the total cost to the Federal Government may be authorized by the Chief of the Bureau of Public Roads or his authorized representative.

## REGULATION 7.—PROJECT AGREEMENTS

Section 1. A project agreement between the State highway department and the Secretary shall be executed in triplicate on a form furnished by the Secretary. No payment shall be made by the United States unless or until such agreement has been executed, nor on account of work done prior to recommendation by the district engineer of the Bureau of Public Roads that the plans, specifications, and estimates be approved.

## REGULATION 8.—CONTRACTS

Section 1. No part of the Federal money set aside on account of any project shall be paid until it has been shown to the satisfaction of the Secretary that adequate methods, either advertising or other devices appropriate for the purpose, were employed, prior to the beginning of construction, to insure economy and efficiency in the expenditure of such money.

Sec. 2. Upon publication of advertisements copies thereof shall be furnished to the Bureau of Public Roads.

Sec. 3. Bids shall conform to the standard proposal form, and the items shall be the same as those contained in the estimate provided for in Regulation 6, section 4.

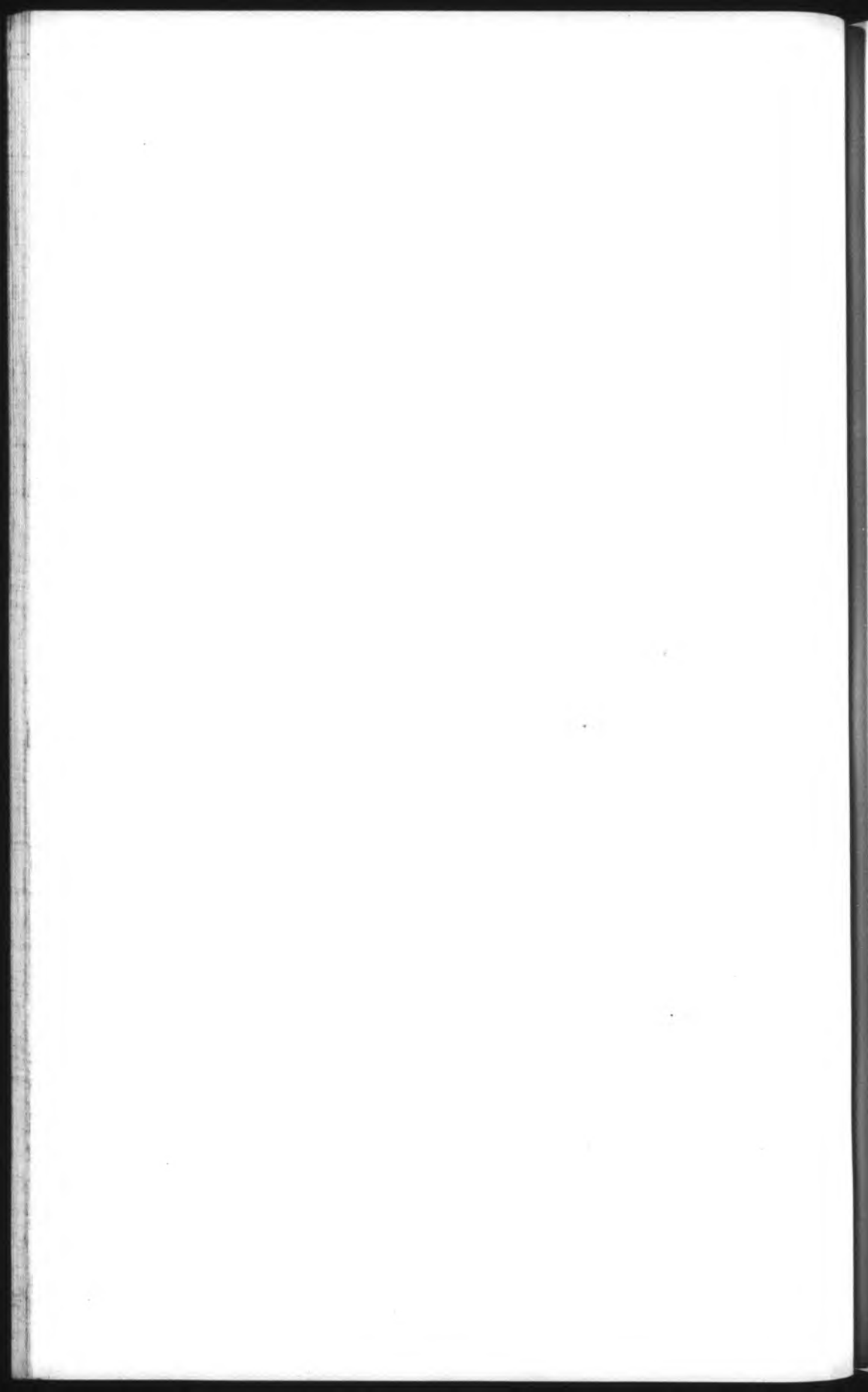
Sec. 4. Copy of the tabulated bid prices, showing the unit prices and the totals of each bid for every project, shall be furnished promptly to the Bureau of Public Roads.

Sec. 5. In advance of the acceptance of any bid sufficient notice of the time and place the contract is to be awarded shall be given to the Bureau of Public Roads to enable it, if it so desires, to have a representative present. When a bid has been accepted prompt notice thereof shall be given to the Bureau of Public Roads.

Sec. 6. If the contract be awarded to any other than the lowest responsible bidder the Federal Government shall not pay more than its pro rata share of the lowest responsi-



View of Sheet Asphalt Pavement on State Road No. 2, South of Gainesville, in Alachua County.



ble bid, unless it be satisfactorily shown that it was advantageous to the work to accept the higher bid.

Sec. 7. The specifications and plans shall be made a part of the contract.

Sec. 8. A copy of each contract, as executed, shall be promptly certified by the State highway department and furnished to the Secretary and no alteration in the contract shall be subsequently made without the approval of the Secretary.

#### REGULATION 9.—CONSTRUCTION

Section 1. Suitable samples of materials to be used in construction work shall be submitted, by or on behalf of the State highway department, to the Bureau of Public Roads whenever requested.

Sec. 2. Unless otherwise stipulated in writing by the Secretary or his authorized representative, materials for the construction of any project shall be tested, prior to use, for conformity with specifications, according to methods prescribed or approved by the Bureau of Public Roads.

Sec. 3. No part of the money apportioned under the act shall be used, directly or indirectly, to pay or to reimburse a State, county, or local subdivision for the payment of any premium or royalty on any patented or proprietary material, specification, process, or type of construction unless purchased or obtained on open actual competitive bidding at the same or a less cost than unpatented articles or methods, if any, equally suitable for the same purpose.

Sec. 4. The supervision of each project by the State highway department shall include adequate and continuous engineering inspection throughout the course of construction.

Sec. 5. Written notice of commencement and completion of work on any project shall be given promptly by the State highway department to the Bureau of Public Roads.

Sec. 6. Reports of the progress of construction, showing force employed and work done, shall be furnished as requested by the Secretary or his authorized representatives.

#### REGULATION 10.—RECORDS AND COST KEEPING

Section 1. Such records of the cost of construction, of inspection, of tests, and of maintenance, done by or on behalf of the State, shall be kept, by or under the direction of the State highway department, as will enable the State to report, upon the request of the Secretary or his authorized representatives, the amount and nature of the expenditure for these purposes.

Sec. 2. The accounts and records, together with all supporting documents, shall be open at all times to the inspection of the Secretary or his authorized representatives, and copies thereof shall be furnished when requested.

#### REGULATION 11.—PAYMENTS.

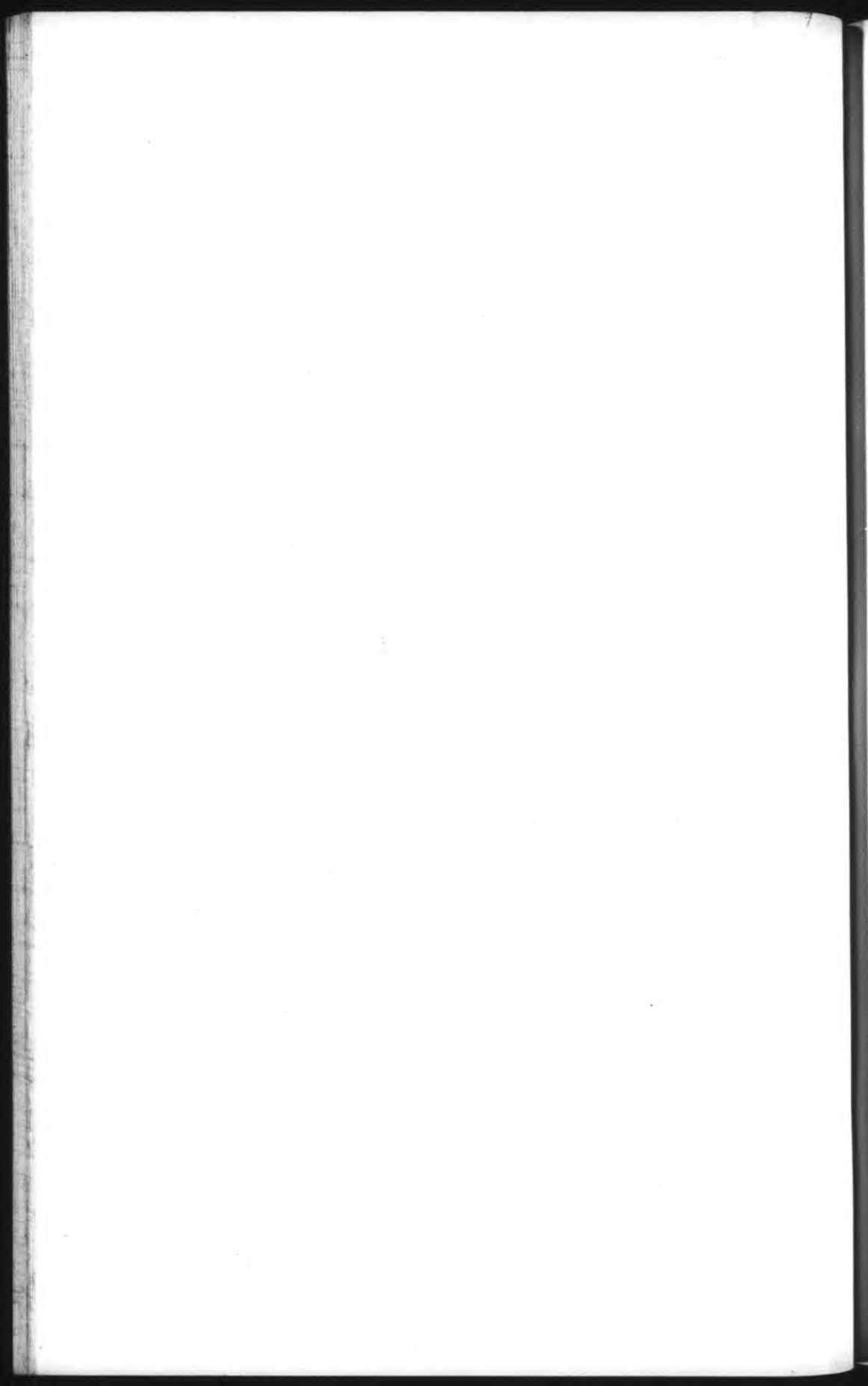
Section 1. Vouchers, in the form provided by the Secretary and certified as therein prescribed, showing amounts expended on any project and the amount claimed to be due from the Federal Government on account thereof, shall be submitted by the State highway department to the Bureau of Public Roads, either after completion of construction of the project, or, if the Secretary has determined to make payments as the construction progresses, at intervals of not less than one month.

#### REGULATION 12.—SUBMISSION OF DOCUMENTS.

Section 1. Papers and documents required by the act or these regulations to be submitted to the Secretary may be delivered to the Chief of the Bureau of Public Roads or his authorized representatives and, from the date of such delivery, shall be deemed submitted.



Federal Aid Project No. 13, Orange County, showing Curb and Gutter Section.





## RAILROAD AGREEMENT.

This Agreement, made and entered into by and between the State Road Department of Florida, party of the first part, and Atlantic Coast Line Railroad Company, Seaboard Air Line Railway Company, Florida East Coast Railway Company and Louisville & Nashville Railroad Company, parties of the second part, witnesseth:

Whereas, said party of the first part is carrying on throughout the State of Florida a large program of highway improvement and construction; and

Whereas, the parties of the second part desire to cooperate with the party of the first part in the elimination as far as possible of grade crossing accidents; and

Whereas, the parties hereto recognize that these accidents usually occur on the main traveled highways; therefore,

It is agreed by and between the parties hereto as follows:

The parties hereto will cooperate with each other in the establishment, construction, relocation and repair of highway crossings under the jurisdiction of said State Road Department upon the following terms and conditions:

## (1)

Whenever a State road crosses an existing railroad right-of-way, the State Road Department shall have the right to determine whether such State road and railroad shall cross each other at grade, or by over-pass or under-pass, under the terms and conditions of this agreement.

The State Road Department may under this agreement provide for the elimination of existing grade crossings of State roads over existing railroad tracks.

## (2)

When it is provided that an over-pass crossing of a highway over an existing railroad shall be established, either

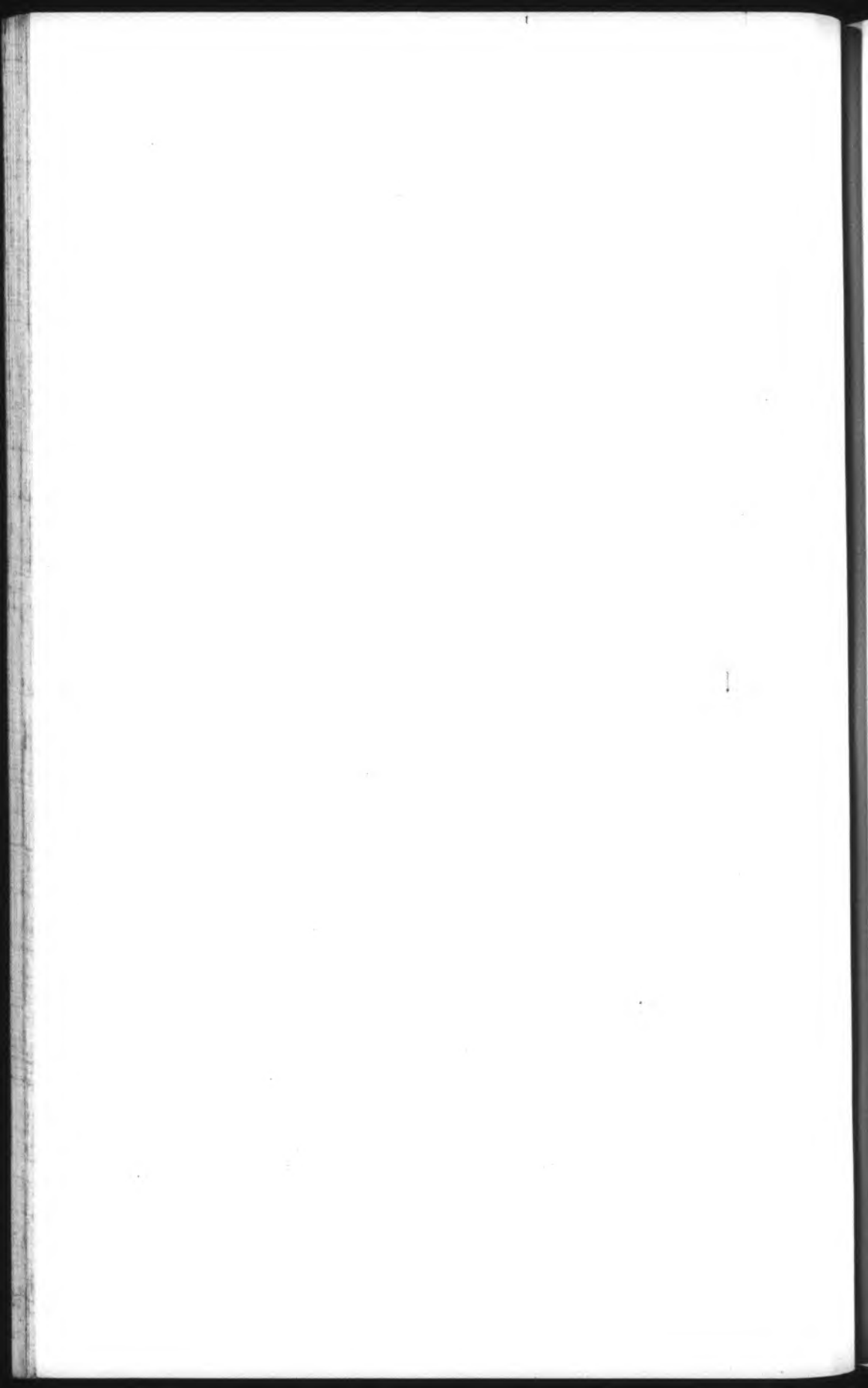
as a new project or as the improvement of an existing crossing, the railroad involved shall be responsible for one-half of the entire cost of the bridge which shall span the opening over the tracks of the railroad from abutment to abutment and including such abutments; and the State Road Department shall be responsible for the balance of the cost. The railroad company involved shall maintain the supporting abutments and bents of the bridge which shall span the opening over the tracks of the railroad from abutment to abutment; and the State Road Department shall maintain the balance of the structure. When an over-pass is constructed, it shall be so constructed as to be sufficient to accommodate at least two railway tracks; this requirement may be waived and construction for one railway track provided for at the option of the railway company.

(3)

When it is provided that an under-pass crossing of a highway under an existing railroad shall be established, either as a new project or as the improvement of an existing crossing, the railroad involved shall be responsible for one-half of the expense of all excavations through the existing railroad fill of the railroad right-of-way and one-half of the complete cost of the structure necessary to carry the railroad tracks on the railroad right-of-way including the foundation, sub-structure and super-structure; and the State Road Department shall be responsible for the balance of the cost. The railroad company involved shall maintain the abutments and super-structure of such under-pass and the State Road Department shall maintain the roadway and drainage thereof. When an under-pass is constructed, it shall be so constructed as to be sufficient to accommodate at least two railway tracks; this requirement may be waived and construction sufficient for one railway track provided for at the option of the railway company.



Bituminous Macadam on Road No. 4 in St. Lucie County, Federal Aid Project No. 36-A.



(4)

When it is provided that a crossing at grade shall be established over a railroad, either as a new project or as a re-location of an existing crossing, the railroad company involved shall be responsible for one-half of the cost of such crossing between points ten (10) feet beyond the end of the cross ties on each side of its tracks; and the State Road Department shall be responsible for the balance of the cost. The railroad company involved shall maintain the crossing between points ten (10) feet beyond the end of the cross ties on each side of its tracks and the State Road Department shall maintain the balance of such crossing.

(5)

Where a new line of railroad, owned or controlled by the parties hereto, crosses an existing highway under the jurisdiction of the State Road Department, unless said State Road Department and the railroad shall agree for a crossing at grade (in which event section four shall apply), the railroad shall have the right to elect whether said highway shall be carried over or under the proposed railroad track. In case it elects that the highway shall be carried over the railroad then the State Road Department shall bear one-half of the cost of the bridge spanning the railroad tracks, from abutment to abutment, including abutments, and the railroad shall provide the necessary fills to restore the existing width of the highway road-bed for the highway approaching said bridge, which shall be on a grade of five per cent unless otherwise agreed upon, and shall cooperate with the State Road Department in the reconstruction of the pavement disturbed to an amount equal to the appraised value of the existing pavement so disturbed. In case the railroad shall elect that the railroad shall be carried over the highway, then and in that event the State Road Department shall pay one-half of the cost of the railroad bridge spanning the highway, including the abutments

thereto, and the railroad shall provide such fills for its tracks approaching said bridge as may be necessary.

The same policy is to prevail as to elimination of grade crossings over new railroad construction as is applied in the case of old railroad construction; that is, the elimination of a grade crossing over new railroad construction will be required only under the same circumstances and conditions as would cause the elimination of a grade crossing over old construction, and there shall be no discrimination as between the two types of construction.

The construction of additional track or tracks on an existing right-of-way of an existing railroad shall not be considered new construction but crossings of highways under the jurisdiction of the State Road Department over such multiple track lines shall be governed by the provisions of Sections one, two, three and four hereof.

(6)

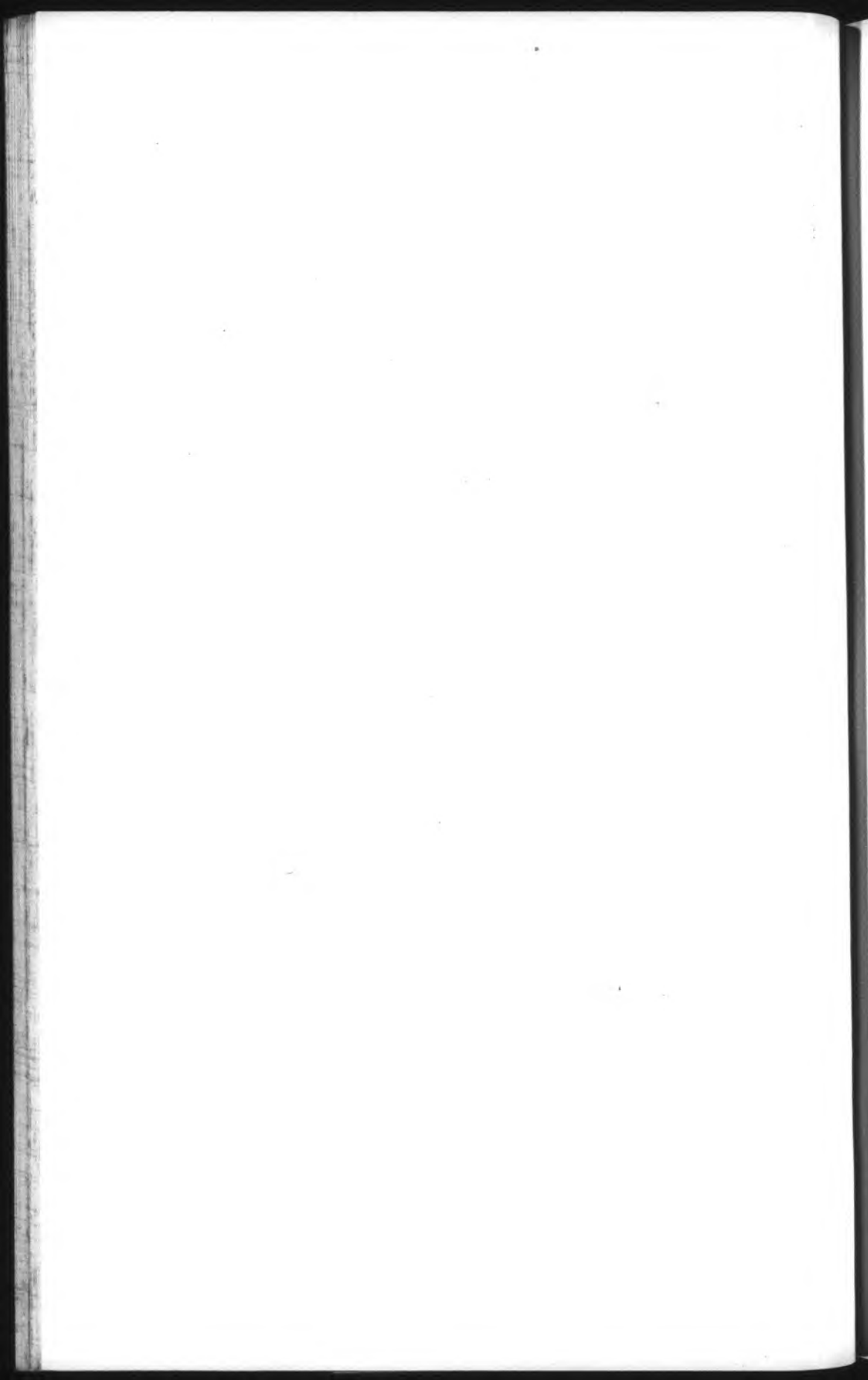
No railroad shall be obligated under this proposal and its acceptance to expend in any one calendar year a sum in excess of one-fifth of one per cent of its total gross operating revenue derived from business in the State of Florida both interstate and intrastate for the calendar year next preceeding; provided, that this clause shall not preclude consideration of any crossing improvement by any railroad company or companies under this proposal and the participation of such company or companies in such improvement provided the exigencies of the case and the circumstances of the company or companies in the judgment of its officers warrant such improvement.

(7)

The agreement shall be effective from and after this, the 3rd, day of July, A. D. 1924.



A section of 18-foot Concrete Highway, showing Standard Type of Wooden Guard Rail.





(8)

Whenever an overhead bridge, under-pass, or grade crossing, is substituted for an existing grade crossing, the existing grade crossing shall be eliminated, closed and vacated.

(9)

This agreement shall remain of force until terminated by one year's written notice from either party unto the other.

STATE ROAD DEPARTMENT OF FLORIDA.

By H. B. Phillips, Chairman.

Attest: Ella Cleary Thompson, Secretary.

ATLANTIC COAST LINE RAILROAD COMPANY.

By Lyman DeLano, Executive Vice-President.

SEABOARD AIR LINE RAILWAY COMPANY.

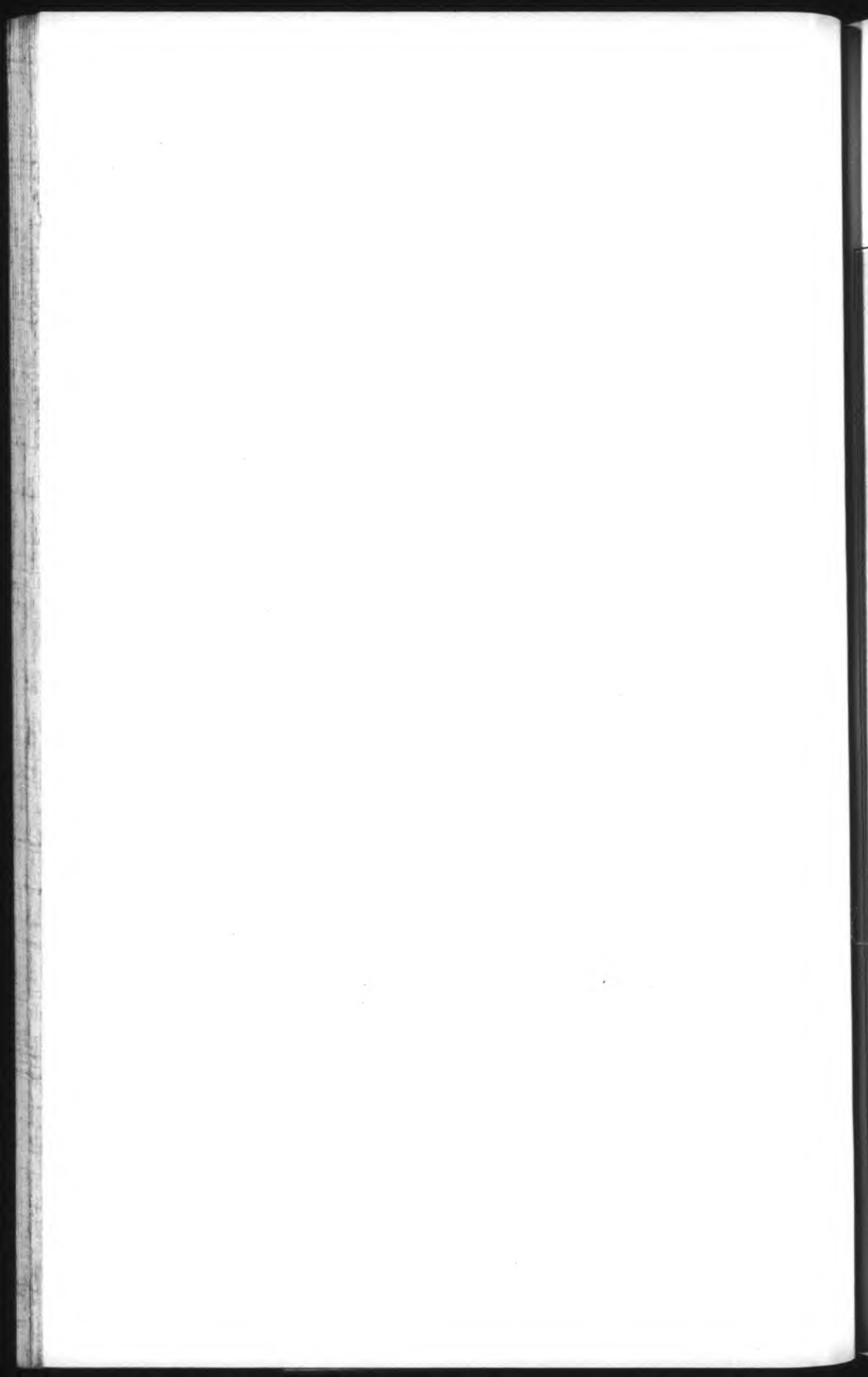
By W. L. Stanley, Vice-President.

FLORIDA EAST COAST RAILWAY COMPANY.

By H. N. Rodenbaugh, General Manager.

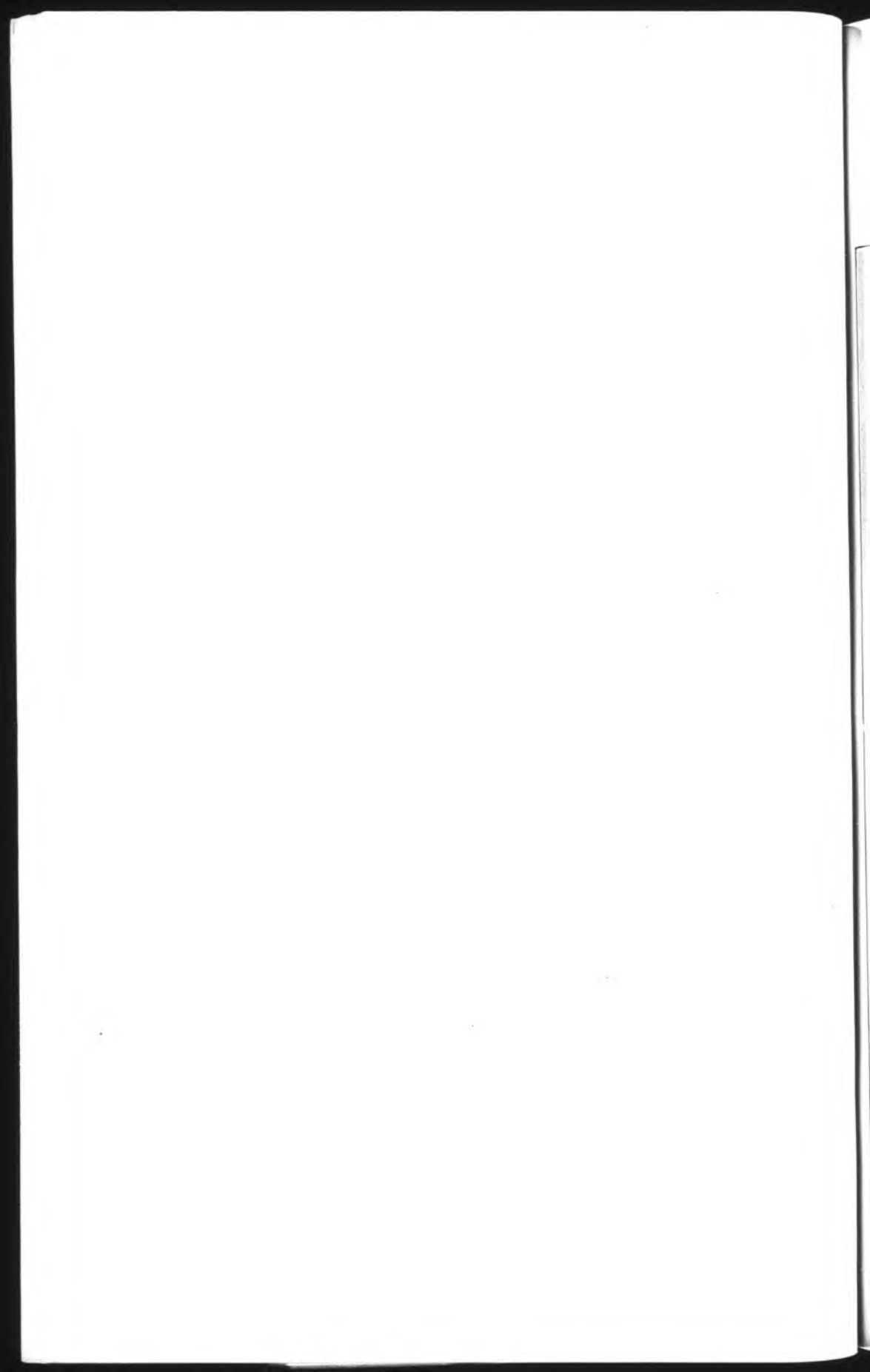
LOUISVILLE & NASHVILLE RAILROAD CO.

By W. L. Mapother, President.





Plain Cement Concrete Pavement, Federal Aid Project No. 35, Escambia County.



## State Highway Engineer's Report

---

Hon. H. B. Phillips,  
Chairman, State Road Department,  
Tallahassee, Florida.

Dear Sir:

I have the honor to submit to you the report of the State Highway Engineer for the period from January 1st, 1923, to December 31st, 1924.

Respectfully submitted,

J. L. CRESAP,  
State Highway Engineer.

### ORGANIZATION

From January 1st, 1923, to August 8th, 1923, Mr. Wm. F. Cocke was State Highway Engineer, he having resigned to enter another line of work. From August 8th, 1923, to December 1st, 1923, I served the Department as Acting State Highway Engineer, and from December 1st, 1923, to December 31st, 1924, as State Highway Engineer.

There have been three vacancies in the position of Division Engineer during the past two years, all of which were filled with men already in the employ of the Department. There have been numerous changes in the personnel of the field engineers, for various reasons, some entering other lines of work, but in most cases engineers working for the Department are able to get positions with cities and counties which pay a larger salary than the Department can pay for similar work. In case of a vacancy it has always been the policy of the Department to promote some one in the employ of the Department at the time, if a man of suitable qualifications is available.

## SURVEYS

Up until the last few years, a survey for a road consisted of a preliminary line run along the existing road in most cases, and levels taken every hundred feet in order to determine something of the steepness of the grades and the approximate amount of material to be moved in order to get a grade that would come within the law. Usually, bridge data was guessed at (and in most cases the guess was wrong) in order to make the cost of the work come within the money available.

When it is considered that the building of a highway system stimulates development adjacent to or near a highway and that such development fixes this so that it makes it hard to change in later years, it is evident that proper location of a road is the most important thing, and really the only permanent thing, to a road, is the location.

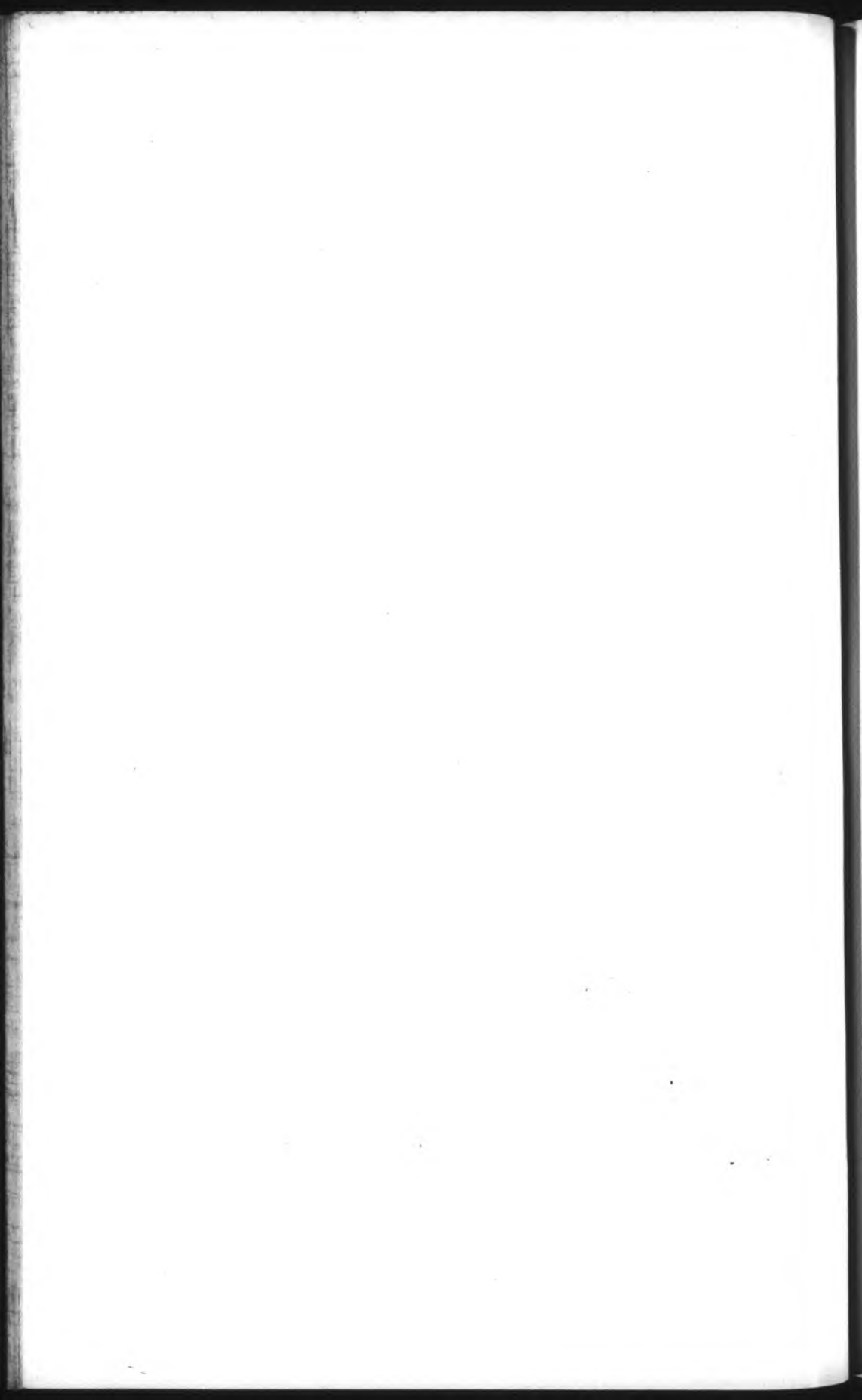
The time and money spent on preliminary surveys to develop a location is therefore a good investment that will pay dividends in the future.

Surveys made by this Department include a complete investigation of the territory through which the road is to run, as to soil conditions, drainage areas as well as a general topography of the surrounding country. Complete soundings are taken for all bridge structures, and in many cases well machines, pumps and other machinery are employed in determining a suitable foundation for a bridge.

During the past two years this Department has maintained from two to five locating parties in the field, and has completed 394 miles of finished location. In making a location for a road it is necessary many times to run a number of lines, and for each mile of finished location it will be safe to say that at least three miles of survey was made. The table inserted shows the list of approved surveys made and the cost of each.



Sheet Asphalt Pavement on State Road No. 5, in Hernando County.





## SURVEYS AND LOCATIONS MADE

1923-24

No. Road	No. Project	County	Length	Cost
2	26	Columbia .....	11.01	\$ 459.52
2	43	Marion .....	10.44	729.27
3	46	Nassau .....	11.52	924.60
4	47	St. Johns .....	14.88	1,625.11
4	48	St. Johns .....	15.68	1,368.67
4	49	Flagler .....	13.40	1,123.65
1	514	Jackson .....	11.00	922.38
2	553	Marion .....	9.15	327.50
8	562-B	Polk .....	10.71	1,342.45
5	564-A	Charlotte .....	10.88	1,884.55
5	564-B	Charlotte .....	10.03	1,884.55
1	565	Madison .....	15.64	670.53
1	751	Madison .....	14.73	1,569.40
9	574	Madison .....	11.66	519.70
5	576	Sarasota .....	5.68	919.13
5	581	Hillsborough .....	11.00	1,933.67
1	586	Washington .....	17.37	2,928.62
3	588	Putnam .....	2.34	693.90
3	595	Volusia .....	7.43	748.38
1	598-A	Jefferson .....	9.45	1,182.17
1	598-B	Jefferson .....	7.80	869.91
13	607-B	Bradford .....	5.68	222.86
1	612	Leon .....	17.58	1,977.32
5	613	Sarasota .....	4.62	713.84
5	614	Sarasota .....	17.01	3,155.46
5	617	Alachua .....	5.17	296.15
5	618	Alachua .....	10.89	623.81
5	619	Alachua .....	9.28	531.53
1	621	Okaloosa .....	15.17	1,550.48
35	623	Madison .....	12.13	808.05
0	624	Hamilton .....	6.48	186.84
3	628	Volusia .....	11.90	1,692.51
1	633	Gadsden .....	9.60	528.37
1	634	Jackson .....	11.14	922.39
10	637	Leon .....	18.08	1,482.74
1	639	Gadsden .....	9.83	528.67
1	45*	Madison .....	.17	929.47
3	421*	Nassau .....	.13	2,436.39
5	493*	Manatee .....	1.00	4,083.44
Total miles .....			394.69	\$47,297.98

\*Bridge Surveys.

## PLANS

After surveys have been made for proposed work to be done by the Department, all notes and information are sent to the Tallahassee office, where complete plans are prepared. In preparing plans it is necessary to plat and figure drainage areas, in order to determine the size of the structures necessary to adequately take care of the flow of water. Alignment and profile maps are prepared, on which a tentative grade line is drawn. The plans are then returned to the Division Engineer in general charge of the work to be done in order that he may make a further inspection of the survey in the field, so that he may determine the adequacy of the proposed plans. Such changes or alterations as are thought to be necessary are marked on these proposed plans and the same are then returned to the Tallahassee office for completion. From this tentative grade line cross-sections are platted and figured in order to determine the amount of earth to be moved. After figuring the earth work quantities, the grade line is so arranged to eliminate waste as well as provide for sufficient material with which to make the roadbed.

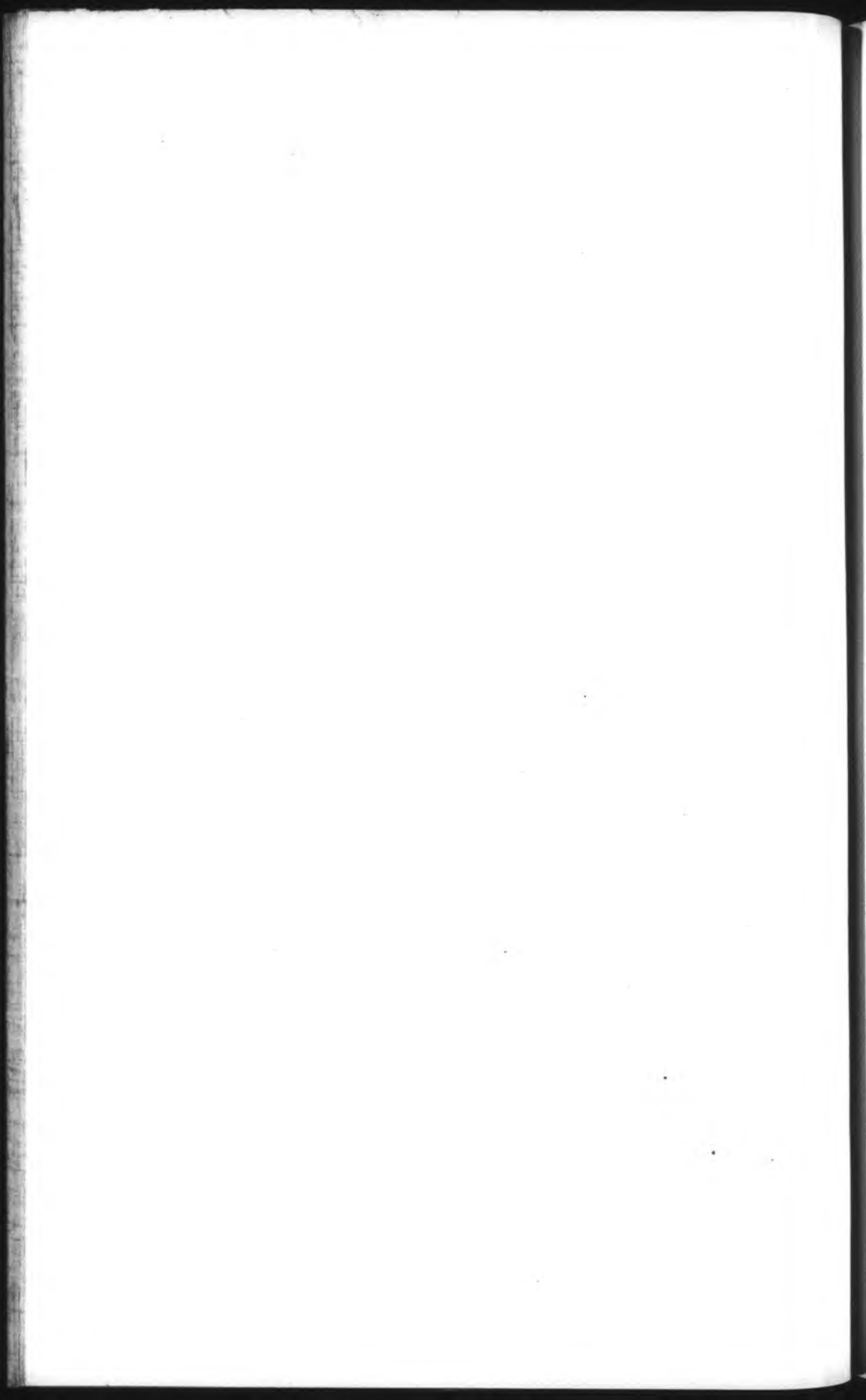
Side drains along the highway as well as outlet ditches leading from culverts receive the same careful attention as any other part of the plan. Side drains are planned with true grades and even slopes in order that they may drain at all times and that ponds of water will not be left along the roadbed. Outlet ditches are cut true to grade and to as perfect alignment as the road itself, as proper drainage is one of the main factors in road construction and maintenance.

After the plans are made and all quantities figured a detailed estimate is made of the cost of the section of road for which the plans were prepared.

During the past two years detail plans and estimates have been made for 664.03 miles of road. No construction work of any kind is begun until plans are made for the same. A table is herein inserted which shows a list of the plans made during the last two years as well as the cost of each.



Lime Rock Base with surface treatment, Project No. 519, Road No. 5, Manatee County.



## PLANS PREPARED FOR ROADS

1923-1924

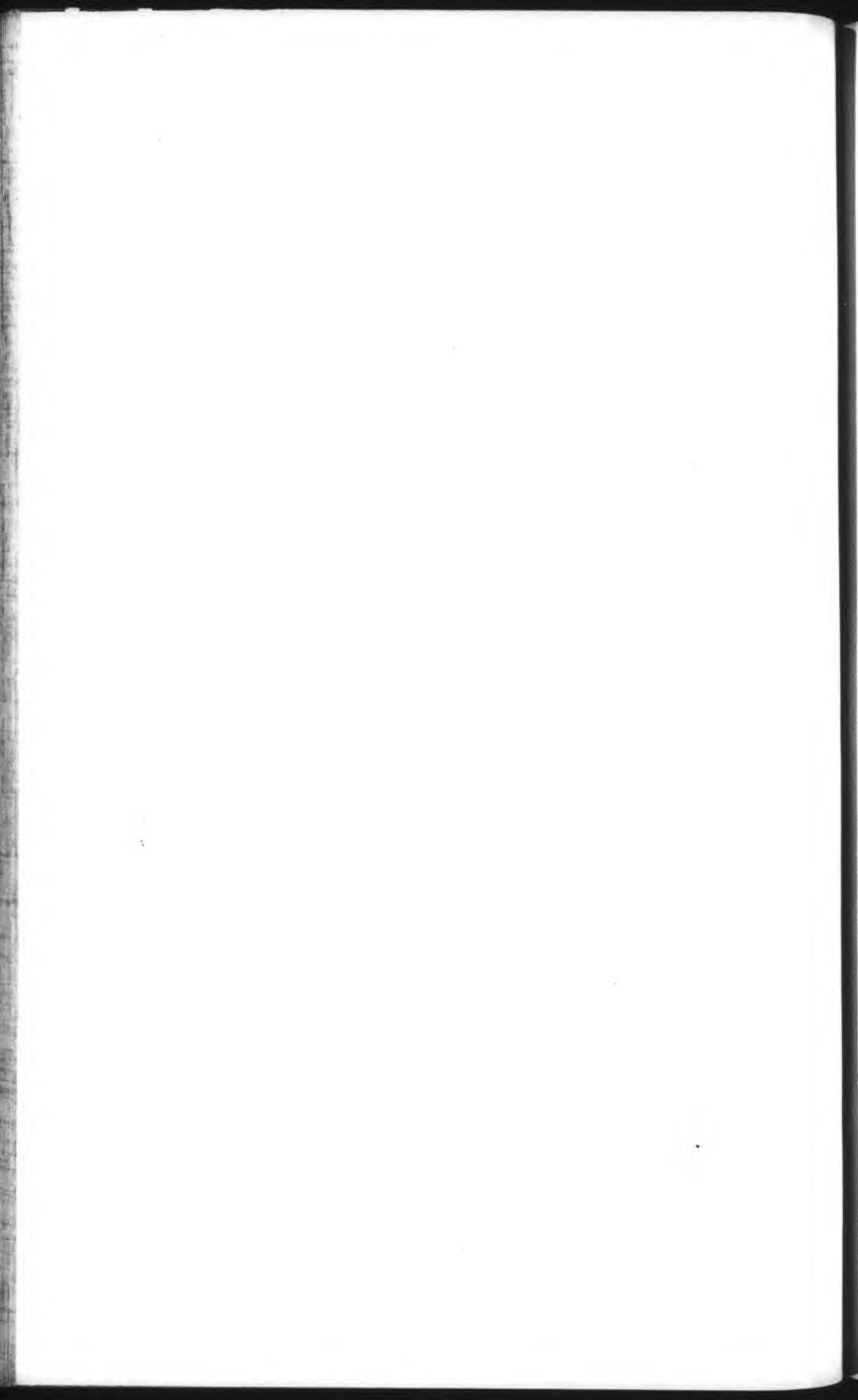
Road No.	Proj. No.	County	Length	Type	Cost
2	26	Columbia .....	11.01	Conc.	\$ 238.45
2	27	Columbia .....	12.36	Conc.	267.69
4	36-B	St. Lucie .....	7.12	Conc.	154.20
2	37	Alachua .....	14.00	S. A.	204.52
4	40	Brevard .....	36.49	S. T.	790.30
2	43	Marion .....	10.44	S. A.	226.11
2	44	Lake .....	10.52	B. C.	227.84
3	46	Nassau .....	11.53		249.72
4	47	St. Johns .....	14.88		322.27
4	48	St. Johns .....	15.68		339.60
4	49	Flagler .....	13.40		290.22
1	504	Columbia .....	9.15	S. C.	198.17
1	514	Jackson .....	11.04	S. C.	239.10
1	521	Nassau .....	12.41	S. T.	268.78
1	529	Suwannee .....	12.14	S. C.	262.93
1	533	Suwannee .....	13.47	S. C.	291.73
24	534	Brevard .....	14.07	S. T.	304.73
23	537	Marion .....	6.93	S. T.	150.09
5	544	Pasco .....	20.08	S. T.	434.89
5	545	Hernando .....	9.51	S. A.	205.97
4	546	Brevard .....	5.00	S. T.	108.29
2	553	Marion .....	9.15	S. T.	198.17
4	554	Brevard .....	5.00	S. T.	108.29
8	562-B	Polk .....	10.71	S. A.	231.96
5	564-A	Charlotte .....	10.88	S. T.	235.64
5	564-B	Charlotte .....	10.30	Marl	220.08
1	565	Madison .....	15.64	S. C.	338.73
1	567	Walton .....	21.35	S. C.	462.40
1	568	Jackson .....	.75	S. C.	16.24
5	570	Manatee .....	3.96	S. A.	85.77
1	571	Madison .....	14.73	S. C.	319.02
9	574	Madison .....	11.66	S. T.	252.53
3	575	Putnam .....	5.46	S. T.	118.25
5	576	Sarasota .....	5.68	S. T.	123.02
19	580	Dixie .....	3.75		81.22
5	581	Hillsborough .....	11.00		238.24
1	586	Washington .....	17.37	S. C.	376.20
3	588	Putnam .....	2.14	S. A.	46.35
3	595	Volusia .....	7.43		160.92
4	597	Volusia .....	16.24	S. T.	351.73

## PLANS PREPARED FOR ROADS—Continued.

Road No.	Proj. No.	County	Length	Type	Cost
1	598	Jefferson .....	17.25	S. C.	373.60
2	599	DeSoto .....	7.00		151.61
4	604	Volusia .....	7.72	S. T.	167.20
13	607-B	Clay .....	5.68	S. T.	123.02
4	608	Brevard .....	9.29	Conc.	201.20
1	612	Leon .....	17.58	S. C.	380.75
5	613	Sarasota .....	4.62	S. T.	100.06
5	614	Sarasota .....	17.07		369.70
5	617	Alachua .....	5.17		111.97
5	618	Alachua .....	10.89		235.86
5	619	Alachua .....	9.28		201.00
1	621	Okaloosa .....	15.12	S. C.	327.47
35	623	Madison .....	12.13	S. C.	262.71
0	624	Hamilton .....	6.47	S. C.	140.13
3	627	Putnam .....	3.71		80.35
3	628	Volusia .....	11.90		257.73
1	633	Gadsden .....	9.60		207.92
1	634	Jackson .....	11.15	S. C.	241.49
10	637	Leon .....	18.08	S. C.	391.58
1	639	Santa Rosa .....	9.83		212.90
		Total Miles.....	664.03		\$14,381.38



Section of Sheet Asphalt Pavement on State Road No. 8, between Frost Proof and Avon Park.





## HIGHWAY BEAUTIFICATION

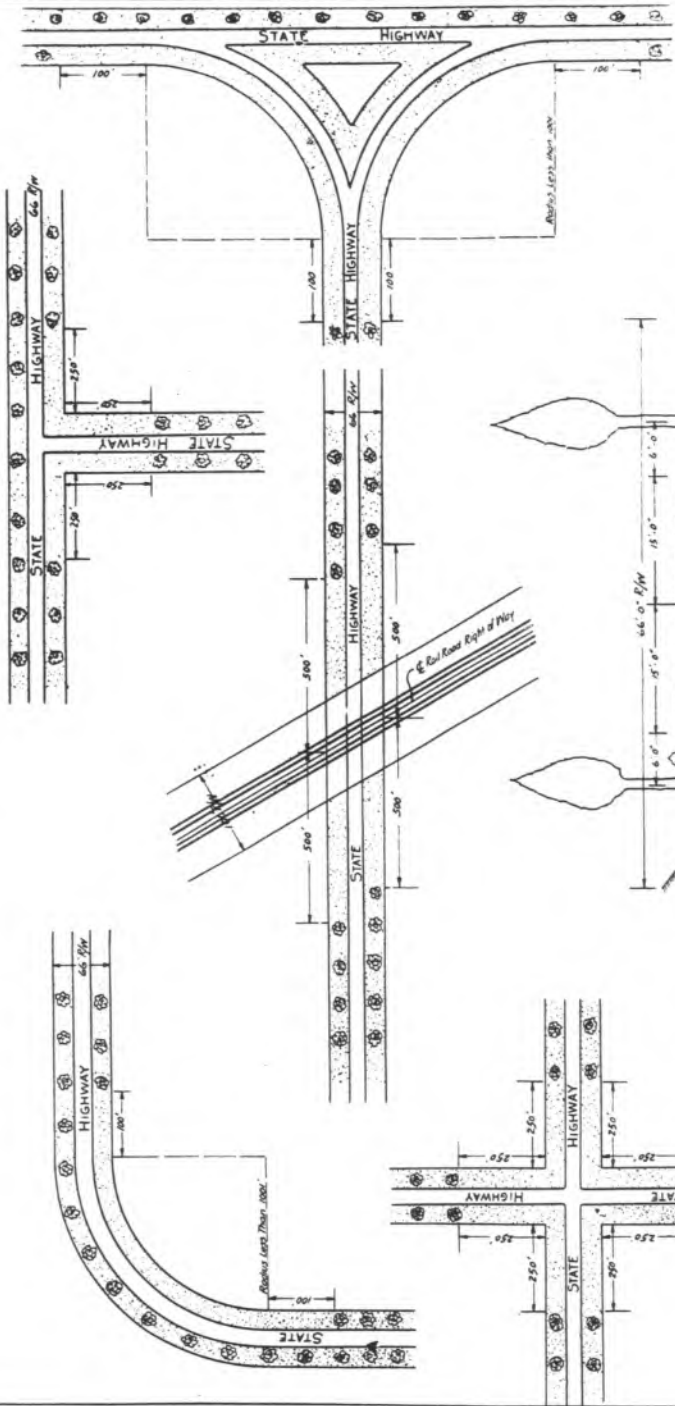
The beautification of highways is in a general sense of recent development, but at the present time is receiving nation-wide attention. For a number of years highway engineers as well as highway officials lost sight of anything in connection with road building except getting a surface over which travel might pass. Drainage ditches and borrow pits alongside of the road were incidental rather than one of the integral parts of a completed highway, which should receive the same care and attention as the surface of the road itself. In many cases it is not practical to build a highway and at the same time preserve the natural growth, but after a road is completed, by using some systematic method any road in any locality can be beautified to such an extent that it will be one of the chief attractions of the neighborhood.

In Florida there are many organizations working along this line and it is hard to predict what the results may be. This Department lends much to this cause by properly draining the roads and by planting grass on the shoulders of all the roads constructed. Road beautification is not always what you do to improve the looks of the road, but in many cases what you prohibit some one else from doing, that would detract from such beauty as the road may already have. Several years ago this Department passed a resolution forbidding the placing of advertising signs on the rights of way of any road constructed by the Department, and at the present time fully half the counties in the State have similar ordinances in effect. The systematic and intelligent planting of trees and shrubbery along the roads is being given consideration by this De-

partment and plans have been prepared whereby beautifications may be carried on, yet not interfere with the safety or comfort of the traveling public.

A photograph is shown in this report to illustrate what may be accomplished and the drawing shows the method of beautification devised by this Department and approved by the Federal Bureau of Public Roads.

12	11	10	9	8	7	6	5	4	3	2	1
----	----	----	---	---	---	---	---	---	---	---	---



STATE OF FLORIDA  
STATE HIGHWAY DEPARTMENT

**STANDARD TREE PLANTING**

Project \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_  
By \_\_\_\_\_

**SPECIFICATIONS**

All trees must be planted according to the specifications and approved by the State Road Department. Trees and shrubs shall be planted in the State Highway right-of-way and shall be planted in the State Highway right-of-way. The trees shall be planted in a regular care after the trees are planted and shall be maintained by the State Road Department.



## RAILWAY CROSSINGS

One of the gravest questions which confronts the traveling public today is the crossing of railways. This matter is being given consideration not only by those in charge of highway construction, but by officials of the railroads as well as those officials who make our laws. Many States have gone so far as to make laws designating just how and when you should cross a railroad with any kind of vehicle, but even this is not effective and the destruction of life and property goes on just the same.

There are only two ways absolutely safe to cross a railroad: One is to go over the railroad and the other is to go under it. This Department, with the cooperation of the Bureau of Public Roads, is trying to give to the State of Florida a system of roads with as few hazards attached as is possible to do so. It is felt that a long step towards solving this problem was taken last year when the Department entered into an agreement with the main trunk line carriers of the State, providing a method of constructing on an agreed basis of division of expense such crossings as would otherwise constitute a traffic menace. The thought behind the agreement is the ultimate entire elimination of grade crossings on all State roads, and it presents a working plan whereby they may be avoided or safeguarded in all future construction. The full text of this agreement appears elsewhere in this report.

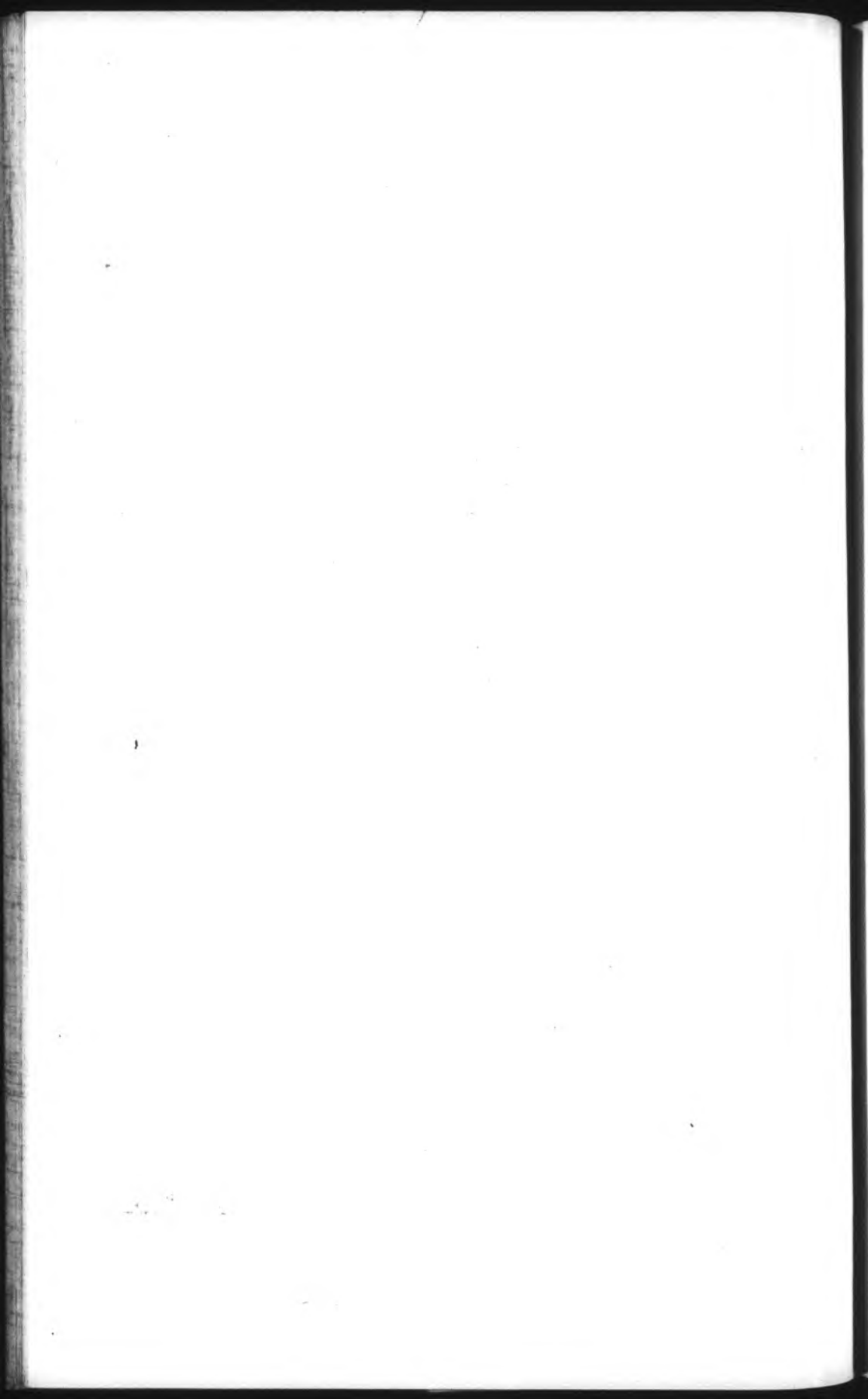
In those cases where it is found impossible or impracticable to separate the grades, the Department is taking steps to safeguard the crossings as nearly as the same can be done under existing circumstances. With this thought in mind a device has been formulated, and in one instance is in practical operation at a grade crossing on the State system of roads. This contemplates the approach to the railroad on a curve or arc, so that the motorist must of necessity slow down before traversing the railroad track. This

device so far has proven to be of a benefit. A sketch showing this plan is presented herewith.

Many unnecessary crossings may be eliminated by relocating the roads, thereby staying on one side of the railroad or the other for greater distances. During the past two years this Department has eliminated forty-nine crossings by relocation, and has under construction or contemplated at the present time eleven overhead crossings and four underpasses, making a total of sixty-four grade crossings eliminated.



*Safety Grade Crossing  
Proj 206 - Rd. 1 - Jackson Co.  
A. & S. A. B. R. R. Crossing  
at Cottondale.*





## TRAFFIC CENSUS

Until January 1st, 1923, the number of vehicles that passed over any section of road in this State was largely imaginary, and it was a common thing to hear some one speak of a certain section of road as the most traveled of any in the State. In deciding the types of pavement to construct, one should be guided largely by the present and prospective travel that uses or is to use the road.

On January 1st, 1923, this Department conceived the idea of taking a systematic census of the traffic over the most important State roads and selected a number of places on these roads whereby an intelligent census could be taken. The first census was taken on January 24th, 1923, beginning at 7 o'clock in the morning and lasting until 7 o'clock the next morning, thereby getting the total travel in one day of twenty-four hours. The census was taken at all places on the same date and during the same hours. Each month thereafter until the present date a census has been taken at these same places on the same day each month.

In taking this census on the same day of the month each time gives a very fair average, as it may be raining at one time and fair at another, or this day may fall on any day of the week, thereby covering those days with little travel as well as those with the maximum travel.

A tabulation is inserted herein showing the results obtained at twenty-two of these stations, which will give the readers of this report a very fair idea of just what the travel is on the main roads of this State throughout the year. It is very interesting to notice the difference in the travel at any one station from month to month as well as the difference in travel between stations on the same road during the same month. Census stations are located well away from towns and cities so as not to include strictly city local travel.

TRAFFIC CENSUS REPORT—1923

Road	Location	January		February		March		April		May		June	
		Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks
1	Blackwater Bridge.....	201	36	344	66	651	93	311	46	232	39	533	28
1	Victory Bridge .....	80	18	197	16	175	27	173	7	210	28	525	24
1	Ellaville .....	79	3	91	8	86	14	114	27	103	22	118	35
2	White Springs .....	122	13	151	10	175	21	142	22	230	33	274	5
2	High Springs .....	319	16	299	23	333	25	272	10	145	12	182	19
2	South of Ocala.....	257	49	383	64	416	56	388	50	363	68	474	24
2	South of Orlando.....	1,395	131	1,317	217	1,386	163	1,388	172	662	57	1,137	241
2	Arcadia .....	460	104	457	99	506	93	514	89	376	67	611	26
3	Wilds Landing .....	33	3	58	2	63	6	28	8	25	5	72	4
3	Sanford .....	790	132	778	134	596	147	741	228	796	142	813	139
4	Callahan .....	109	19	74	6	167	19	254	28	140	2	335	12
4	St. Augustine .....	624	63	523	25	483	58	376	52	372	64	398	47
4	Hastings .....	372	62	496	31	584	48	496	53	377	62	666	57
4	Sharpes .....	294	31	295	24	280	29	194	23	162	12	298	10
4	Vero .....	722	81	527	118	726	117	618	102	557	76	602	9
4	Dade-Proward Co. ....	1,003	200	1,207	154	1,629	223	1,132	126	1,236	123	1,791	56
5	Montebrook .....	151	20	220	59	482	40	318	38	426	41	447	27
5	Brocksville .....	216	17	.....	.....	104	12	144	59	.....	.....	.....	.....
5	Palmetto .....	486	201	885	160	1,048	186	1,109	410	945	315	1,211	60
17	Lakeland .....	1,823	260	2,067	286	1,535	180	1,260	222	1,153	213	1,190	214
17	Tampa-Oldsmar .....	681	147	101	74	1,043	128	652	135	692	103	1,575	56
24	Deer Park .....	103	11	101	12	110	33	63	3	25	.....	.....	.....

TRAFFIC CENSUS REPORT—1923—(Continued)

Road	Location	July		August		September		October		November		December	
		Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks
1	Blackwater Bridge . . . .	405	100	349	69	394	64	340	81	487	104	639	79
1	Victory Bridge . . . . .	254	15	255	29	239	33	223	51	247	34	313	19
1	Ellaville . . . . .	124	49	122	38	109	27	109	31	117	22	191	17
2	White Springs . . . . .	253	23	268	35	220	23	849	130	296	44	344	37
2	High Springs . . . . .	372	62	416	51	572	27	272	46	542	58	577	60
2	South of Ocala . . . . .	327	39	282	53	283	39	344	49	319	38	383	35
2	South of Orlando . . . . .	557	144	612	152	667	164	717	171	988	174	1,308	173
2	Arcadia . . . . .	429	104	623	172	792	209	613	194	436	186	666	189
3	Wilds Landing . . . . .	53	4	61	3	44	5	75	9	116	9	92	4
3	Sanford . . . . .	849	131	914	127	961	120	1,312	208	990	176	1,244	155
4	Callahan . . . . .	242	31	578	57	471	41	364	91	419	65	439	62
4	St. Augustine . . . . .	426	84	471	80	459	49	660	60	925	66	777	51
4	Hastings . . . . .	407	31	443	33	344	72	680	64	754	79	862	67
4	Sharpes . . . . .	269	22	229	18	182	22	297	25	383	22	377	20
4	Vero . . . . .	475	41	441	83	539	86	527	55	820	104	1,066	85
4	Dade-Broward Co. . . . .	975	220	855	226	1,153	192	1,329	332	1,988	137	1,887	256
5	Montebrook . . . . .	366	95	393	89	304	58	343	92	398	68	381	42
5	Brooksville . . . . .	.....	.....	.....	.....	.....	.....	157	29	192	41	156	17
5	Palmetto . . . . .	800	275	796	254	792	225	794	305	879	423	983	438
17	Lakeland . . . . .	1,040	201	890	186	712	164	1,389	261	1,707	256	1,684	236
17	Tampa-Oldsmar . . . . .	718	151	760	135	780	122	723	129	1,048	154	1,604	139
24	Deer Park . . . . .	.....	.....	.....	.....	.....	.....	71	11	64	12	130	5

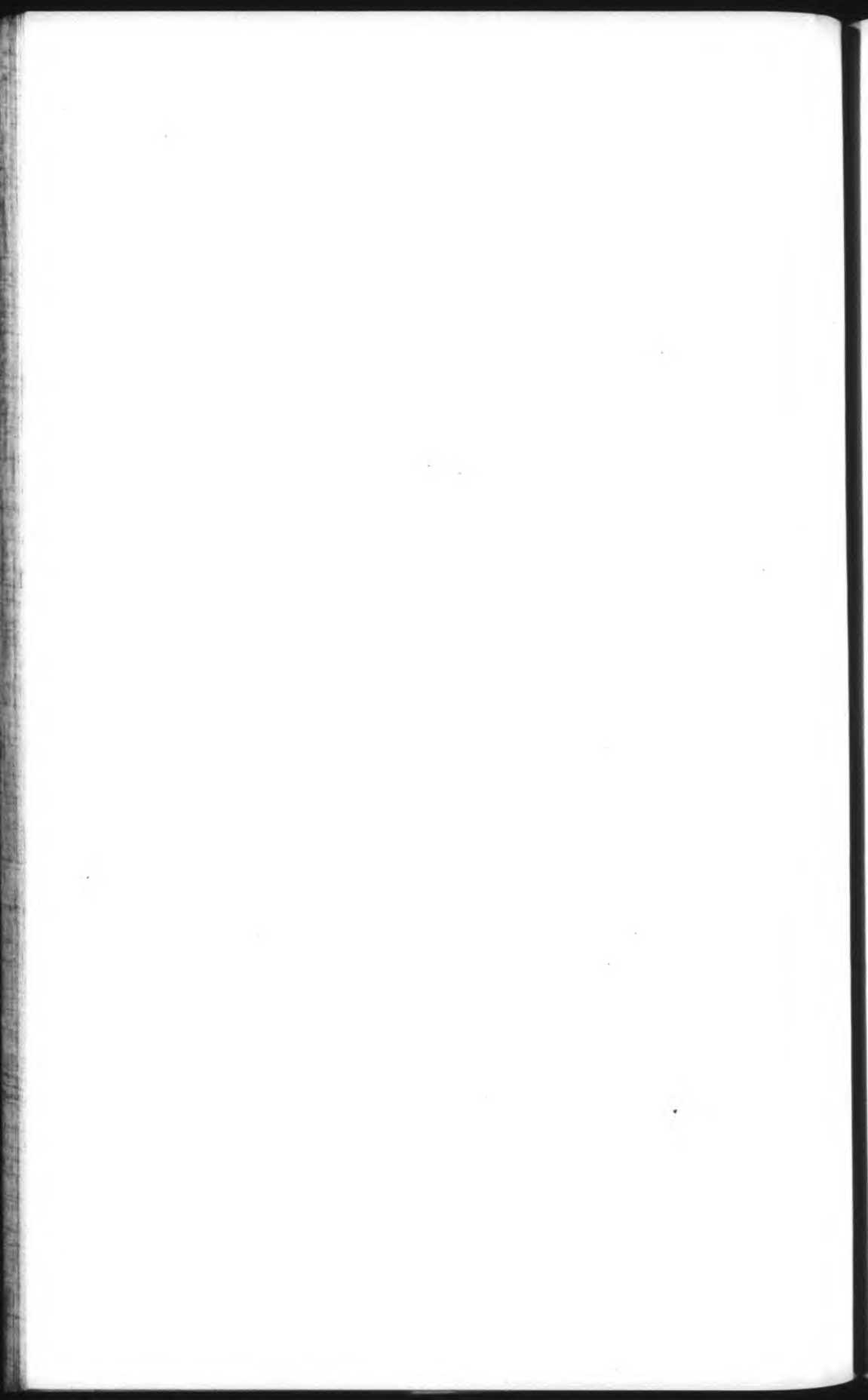
\* Closed

TRAFFIC CENSUS REPORT—1924

		January		February		March		April		May		June	
Road	Location	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks
1	Blackwater Bridge . . . .	235	69	513	24	377	72	409	77	804	133	438	77
1	Victory Bridge . . . . .	119	19	410	13	213	33	290	28	379	34	286	73
1	Ellaville . . . . .	68	20	166	13	82	19	117	20	151	18	128	22
2	White Springs . . . . .	186	22	457	11	386	21	392	37	406	31	421	24
2	High Springs . . . . .	307	.....	197	10	257	18	250	12	243	19	230	24
2	South of Ocala . . . . .	250	56	481	13	410	79	189	44	274	84	385	34
2	South of Orlando . . . . .	786	95	766	95	562	93	1,348	228	489	64	790	106
2	Arcadia . . . . .	564	261	668	42	422	210	474	148	497	190	649	75
3	Wilds Landing . . . . .	42	7	76	2	113	3	115	9	101	6	86	4
3	Sanford . . . . .	1,218	155	1,440	150	1,383	204	1,020	150	856	93	1,013	137
4	Callahan . . . . .	183	78	369	30	141	72	283	58	363	43	278	74
4	St. Augustine . . . . .	446	76	609	90	731	100	707	88	493	68	492	78
4	Hastings . . . . .	607	66	499	57	670	64	623	27	448	84	492	87
4	Sharpes . . . . .	451	16	436	28	318	25	316	17	219	23	256	10
4	Vero . . . . .	1,190	116	1,094	74	1,020	132	651	107	689	107	723	161
4	Dade-Broward Co. . . . .	1,464	155	2,557	100	1,500	291	1,639	290	814	122	747	209
5	Montebrook . . . . .	248	52	404	36	226	58	290	26	374	144	232	87
5	Brooksville . . . . .	179	56	208	81	202	71	158	66	216	63	293	56
5	Palmetto . . . . .	1,200	797	386	90	1,071	470	869	475	1,244	536	1,140	412
17	Lakeland . . . . .	1,999	299	1,405	257	1,322	251	1,377	275	1,428	307	1,101	278
17	Tampa-Oldsmar . . . . .	1,870	200	1,302	159	1,221	204	1,346	168	1,405	176	1,317	176
24	Deer Park . . . . .	99	10	117	15	278	31	229	58	352	30	151	38



A scene of typical Central Florida Beauty on State Road No. 2.



## TRAFFIC CENSUS REPORT—1924—(Continued)

Road	Location	July		August		September		October		November		December	
		Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks
1	Blackwater Bridge . . . . .	501	83	601	31	431	87	552	133	376	57	686	95
1	Victory Bridge . . . . .	332	53	881	10	224	38	296	56	395	40	495	35
1	Ellaville . . . . .	135	26	286	16	95	20	135	28	161	28	322	30
2	White Springs . . . . .	532	27	880	28	675	33	470	38	1,014	75	742	63
2	High Springs . . . . .	229	30	211	35	260	37	290	39	310	41	400	50
2	South of Ocala . . . . .	485	45	575	64	615	43	652	26	888	97	775	60
2	South of Orlando . . . . .	690	91	785	132	957	186	1,285	250	1,407	192	1,499	311
2	Arcadia . . . . .	507	58	479	119	765	58	585	151	617	150	638	142
3	Wilds Landing . . . . .	73	2	94	2	47	1	32	1	60	4	120	8
3	Sanford . . . . .	1,110	152	819	187	1,011	102	886	125	1,395	280	1,883	290
4	Callahan . . . . .	282	55	535	39	430	36	339	37	638	185	713	122
4	St. Augustine . . . . .	469	61	558	38	472	43	462	75	680	137	1,069	149
4	Hastings . . . . .	447	84	531	63	505	64	450	78	542	67	639	47
4	Sharps . . . . .	293	4	250	3	230	12	214	20	300	32	357	44
4	Vero . . . . .	844	145	1,063	118	924	104	1,082	120	1,296	175	1,476	202
4	Dade-Brovard Co. . . . .	799	156	1,566	113	1,432	80	1,302	60	1,420	80	1,713	84
5	Montebrook . . . . .	403	53	551	23	178	57	451	57	383	98	616	34
5	Brooksville . . . . .	253	64	290	80	346	106	475	119	410	54	439	67
5	Palmetto . . . . .	1,114	679	332	49	1,105	110	2,354	775	1,689	726	2,455	827
17	Lakeland . . . . .	1,475	249	1,450	332	1,645	255	1,963	267	1,955	231	2,742	226
17	Tampa-Oldsmar . . . . .	1,211	187	1,454	199	1,416	127	1,642	187	1,761	225	2,368	242
24	Deer Park . . . . .	252	18	315	9	264	22	305	40	450	60	517	...

## CONVICT LABOR

The State Convict Road Force is the oldest institution connected with the State Road Department and is the nucleus around which the present working force has been built.

Since 1917, State convicts have been used by this Department in the construction of roads. The number of convicts first granted to the Department was small, but this has been increased from time to time until at present there are working on the State system of roads under the supervision of this Department approximately one thousand convicts.

For one or two years this Department used convicts to do all classes of road work, but during the past biennial it has been the rule of the Department to confine the work of the convict force to clearing and grubbing and grading of highways.

The convict force is one of the greatest assets the State has for road-building purposes, as pointed out in the accompanying tables. During the past two years the convicts worked 497,943 days on the roads, which represents a money value of approximately \$1,244,857.50, based on the present-day wages paid to free labor.

The State Road Department bears the cost of housing, feeding, clothing and guarding the prisoners making up the road force, which amount, according to the tabulations shown herein, is \$0.773 per calendar day, or \$1.075 per working day.

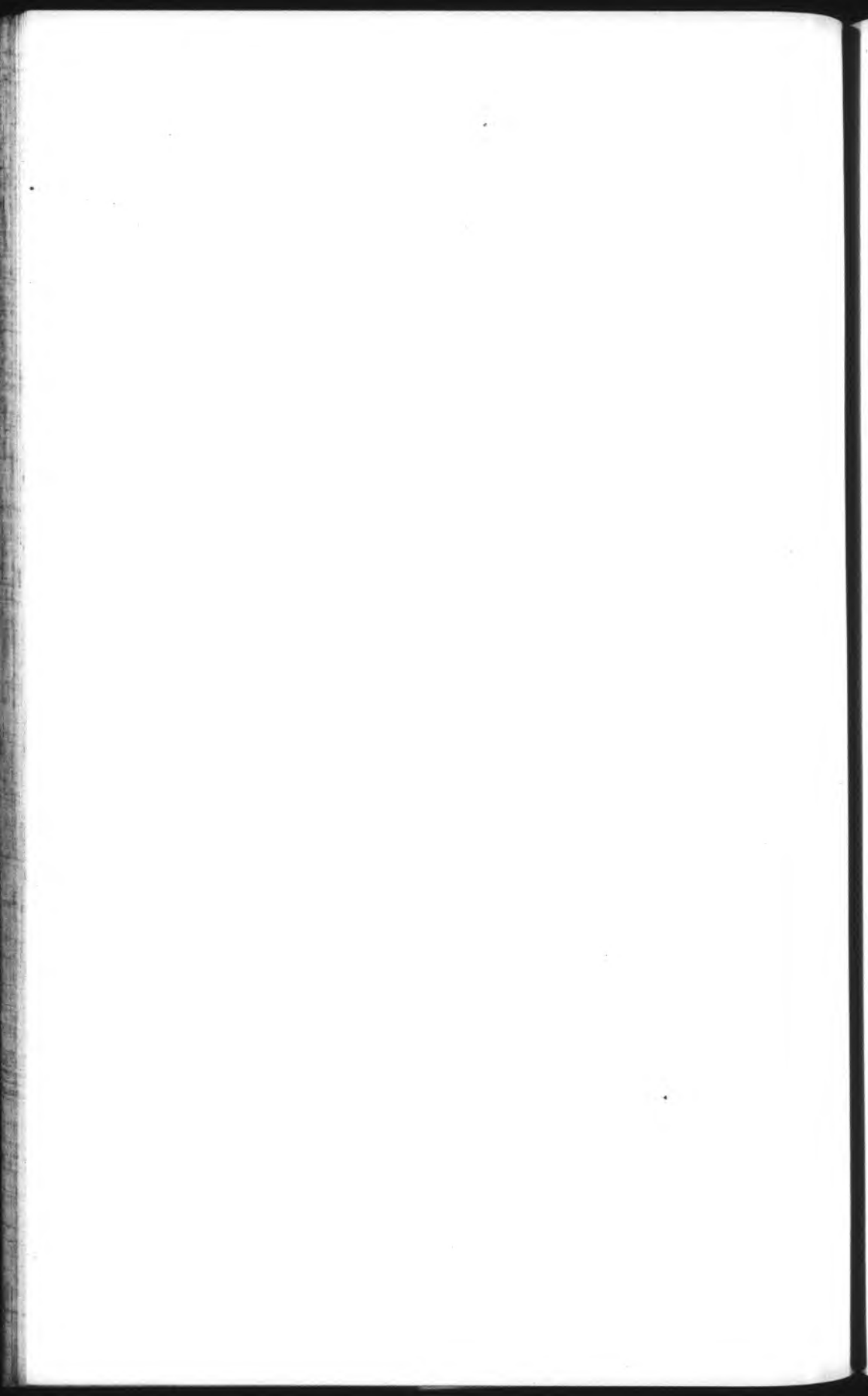
One of the chief advantages of working prisoners on the roads is that it gives them good, wholesome exercise, which promotes better health than if confined in the penitentiary.

At the present time the Department has nineteen camps of convicts, the average number to each camp being 48.4 per camp. The camps are located in the following counties: Jackson, Brevard, Walton, Holmes, Charlotte, Leon,





View showing Approach to Safety Grade Crossing constructed by the Department.



Clay, Jefferson, Manatee, Volusia, Calhoun and Madison ; working on roads Nos. 1, 2, 3, 4, 5, 6, 14 and 35.

The efficiency of the convicts under the present system, although showing a cost lower than free labor, is not up to what it should be, especially among the white camps.

The quality of work performed by the prisoners is of the highest and stands out in appearance far ahead of contract work of similar nature.

It has been the policy of this Department during this biennial to concentrate the prisoners as much as possible in one section, as by this method a closer supervision can be maintained and a certain amount of rivalry among the camps adds to the efficiency.

Summarizing the work done by prisoners, there have been 320 miles right-of-way cleared, 534 miles road graded, 223 miles road clay surfaced, 36 miles surface treated, 21 miles bituminous macadam and 9 miles concrete; also, convict labor was used in construction of 150 culverts and 10 bridges to date.

## STATE CONVICT CAMPS

CAMP NUMBER	Average No. of Prisoners	Total Time Days	Total Time Road	Time on Yard Holidays, Etc.	Cost of Camp
Camp No. 1—L. T. Taylor, Captain.....	50.08	26,610.0	24,439.3	12,170.7	\$ 29,810.74
Camp No. 2—A. L. Conyers, Captain.....	53.32	38,980.5	27,074.2	11,906.3	31,009.02
Camp No. 3—G. D. Dollar, Captain.....	41.24	30,146.3	21,274.3	8,872.0	27,616.99
Camp No. 3-a—I. E. Steele, Captain.....	44.07	7,403.2	5,268.4	2,134.8	6,304.52
Camp No. 4—O. S. Hammond, Captain.....	32.39	23,679.0	17,420.4	6,258.6	20,151.55
Camp No. 5—M. Willis, Campptain.....	55.48	40,557.3	30,354.0	10,203.3	29,759.47
*Camp No. 6.....	45.32	20,668.0	15,089.0	5,579.0	15,272.79
*Camp No. 7.....	15.52	5,415.0	4,304.0	1,111.0	8,383.69
Camp No. 8—H. M. Thomas, Captain.....	54.79	40,054.3	29,618.6	10,435.7	29,790.17
*Camp No. 9.....	10.56	623.0	447.0	176.0	741.81
*Camp No. 10.....	.....	.....	.....	.....	.....
*Camp No. 11.....	18.77	7,997.5	5,859.0	2,138.5	6,869.97
Camp No. 12—J. S. McNeill, Campptain.....	49.96	36,518.0	24,990.7	11,527.3	29,992.60
*Camp No. 13.....	45.94	29,032.0	19,834.0	9,198.0	20,687.14
*Camp No. 14.....	.....	.....	.....	.....	.....
Camp No. 15—A. B. Bradley, Captain.....	58.97	43,109.0	31,976.7	11,132.3	26,573.02
Camp No. 16—J. H. Hunter, Captain.....	39.58	28,932.5	20,943.1	7,989.4	21,948.16
*Camp No. 17.....	42.40	7,675.0	5,584.5	2,090.5	4,814.18
Camp No. 18—J. C. Hansford, Captain.....	44.56	32,577.0	23,772.0	8,805.0	22,663.24
Camp No. 19—W. O. Hilliard, Captain.....	43.45	31,759.0	23,687.1	8,071.9	23,725.07
*Camp No. 20.....	.....	.....	.....	.....	.....
*Camp No. 21.....	.....	.....	.....	.....	.....
Camp No. 22—R. J. Vickery, Captain.....	55.27	40,405.1	28,647.9	11,757.2	31,319.20

*Camp No. 23.....	24.43	4,569.0	3,512.2	1,056.8	3,811.35
*Camp No. 24.....	.....	.....	.....	.....	.....
*Camp No. 25.....	.....	.....	.....	.....	.....
Camp No. 26—B. H. Dickens, Captain.....	50.02	36,565.0	27,956.0	8,609.0	25,166.77
Camp No. 27—A. Coursey, Captain.....	58.91	43,062.9	28,752.9	14,310.0	37,207.16
Camp No. 28—John F. Baker, Captain.....	52.81	38,604.0	27,436.4	11,167.6	30,975.41
Camp No. 29—C. M. Rogers, Captain.....	13.05	9,543.5	6,167.2	3,376.3	8,643.87
Camp No. 30—M. M. Robinson, Captain.....	50.68	29,397.0	22,139.5	7,257.5	21,490.08
Camp No. 31—A. C. McGlew, Captain.....	53.36	27,159.0	20,087.7	7,071.3	18,462.58
*Camp No. 32.....	13.33	1,693.0	1,307.5	385.5	2,300.83
To al.....	947.65	692,735.1	497,943.6	194,791.5	\$ 535,491.38

Note.—Camps marked \* have been discontinued and prisoners assigned to other camps.

## TESTING DIVISION

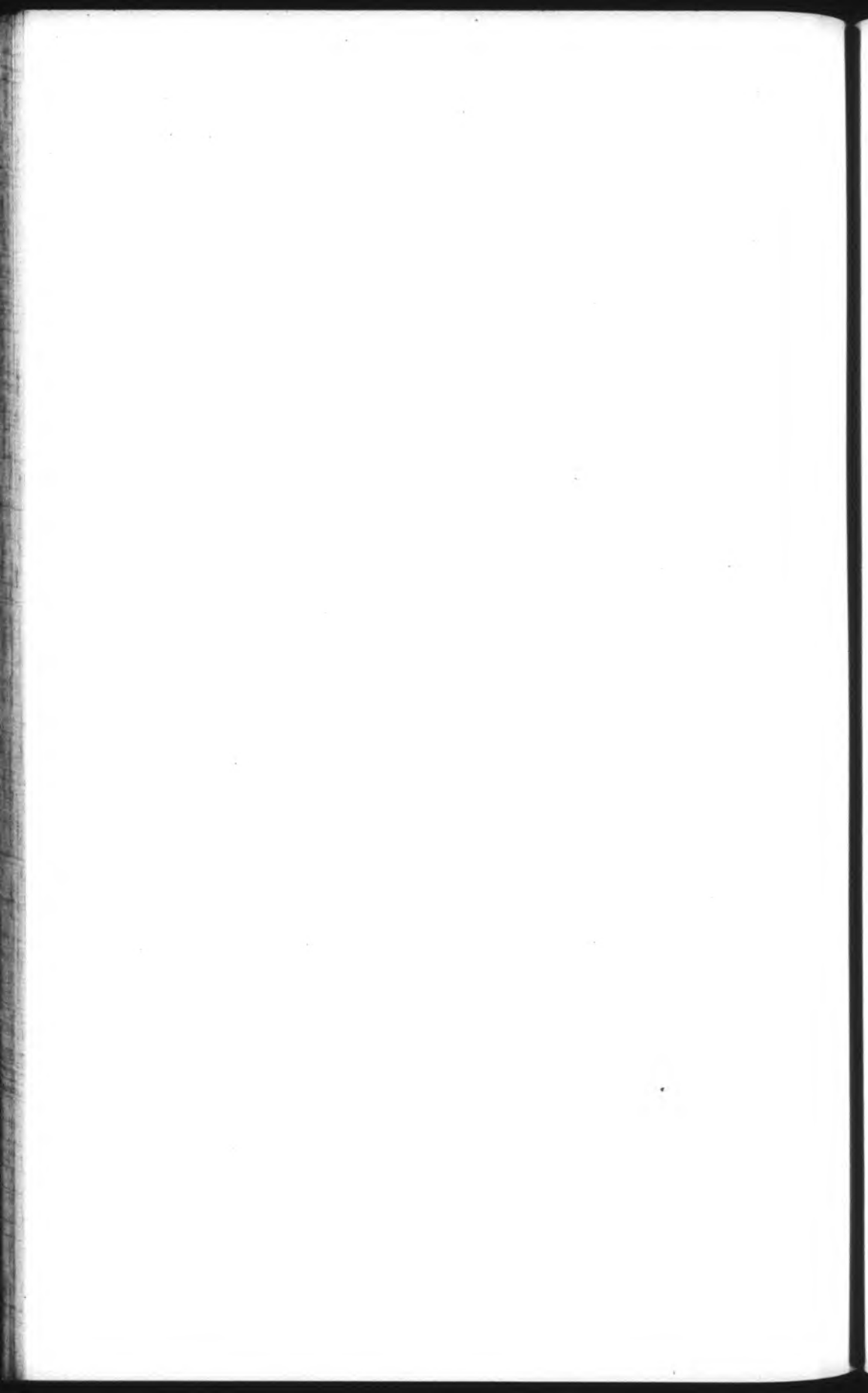
The Department maintains a testing laboratory which is located on the grounds of the Equipment Division near the City of Gainesville. The laboratory is equipped to make tests of any and all materials which go into the construction of the roads and bridges. A building has been constructed, fifty feet wide by one hundred feet in length, and is divided into an office, a work shop, two laboratories and a storeroom. Electric current is used to supply light, heat and power for conducting tests. The new building was occupied during September, 1924; before that time quarters were furnished by the College of Engineering, University of Florida.

Tests have been made of more than 5,000 samples during the past two years. One thousand three hundred and forty-three of these samples were of sand, 957 of bituminous materials and paving mixtures, 827 of Florida lime rock, 487 of gravel, 298 of ojus rock, 282 of stone, 214 of slag, 210 of sand-clay, 160 of portland cement, 158 of concrete, 46 of mineral filler, 45 of miscellaneous samples of steel, water for concrete, marl, coquina, shell and paint.

The Testing Laboratory is one of the most essential departments of any road construction organization, as through it the relative value of all materials is determined. On all projects where high-type pavements or bridges are being constructed a field laboratory is maintained which is under the control of the Testing Department. This insures to the State that materials entering into the structures are up to the standard prescribed in the specifications for the work to be done. Without laboratory control materials of doubtful quality are often used, causing poor construction and faulty work in the end. Tests are particularly valuable in connection with bituminous mixtures and cement concrete.



Concrete Pavement on State Road No. 4, along the Indian River





## FEDERAL AID

From observation it seems that most every one you see has a different idea as to the amount of Federal aid this State can receive and the terms under which it may be obtained, and invariably these ideas are all wrong. In order that this question may be made plain to all the readers of this report, you will find inserted herein a copy of the law as well as all amendments thereto which have been passed by Congress pertaining to Federal aid. Also, a copy of the Rules and Regulations of the Secretary of Agriculture of the United States for carrying out the Federal Highway Act. In this synopsis I will also give some of the controlling factors regarding the Federal Aid Law as well as the application of the same.

The first Act passed by Congress granting Federal aid to the States for the construction of highways was approved July 11th, 1916, which Act was passed primarily for the purpose of the construction of rural post roads, one of the conditions of which Act was that such roads shall be free from tolls of any kind. The Act provided for an appropriation of \$5,000,000.00 for the year 1917, with an increase of \$5,000,000.00 per year for each year until 1921, inclusive. The amounts appropriated by the Government were to be apportioned to the States in the following manner: One-third in the ratio which the area of each State bears to the total area of the United States, one-third in the ratio which the population of each State bears to the total population of the United States, and one-third in the ratio which the mileage of rural delivery routes and star routes in each State bears to the total rural delivery routes and star routes of the United States. These appropriations were placed under the Agricultural Department and the provisions of this Act to be administered by the Secretary of Agriculture of the United States, through the Bureau of Public Roads. States could participate in this appropriation only through their respective Highway Departments.

The Federal Government does not participate in the engineering work necessary to prepare plans and specifications for any Federal-aid project, nor does it participate in the maintenance of any project after construction has been completed. The Government does, however, reserve certain jurisdiction of Federal-aid projects after completion and requires that they be maintained by the States in an acceptable manner.

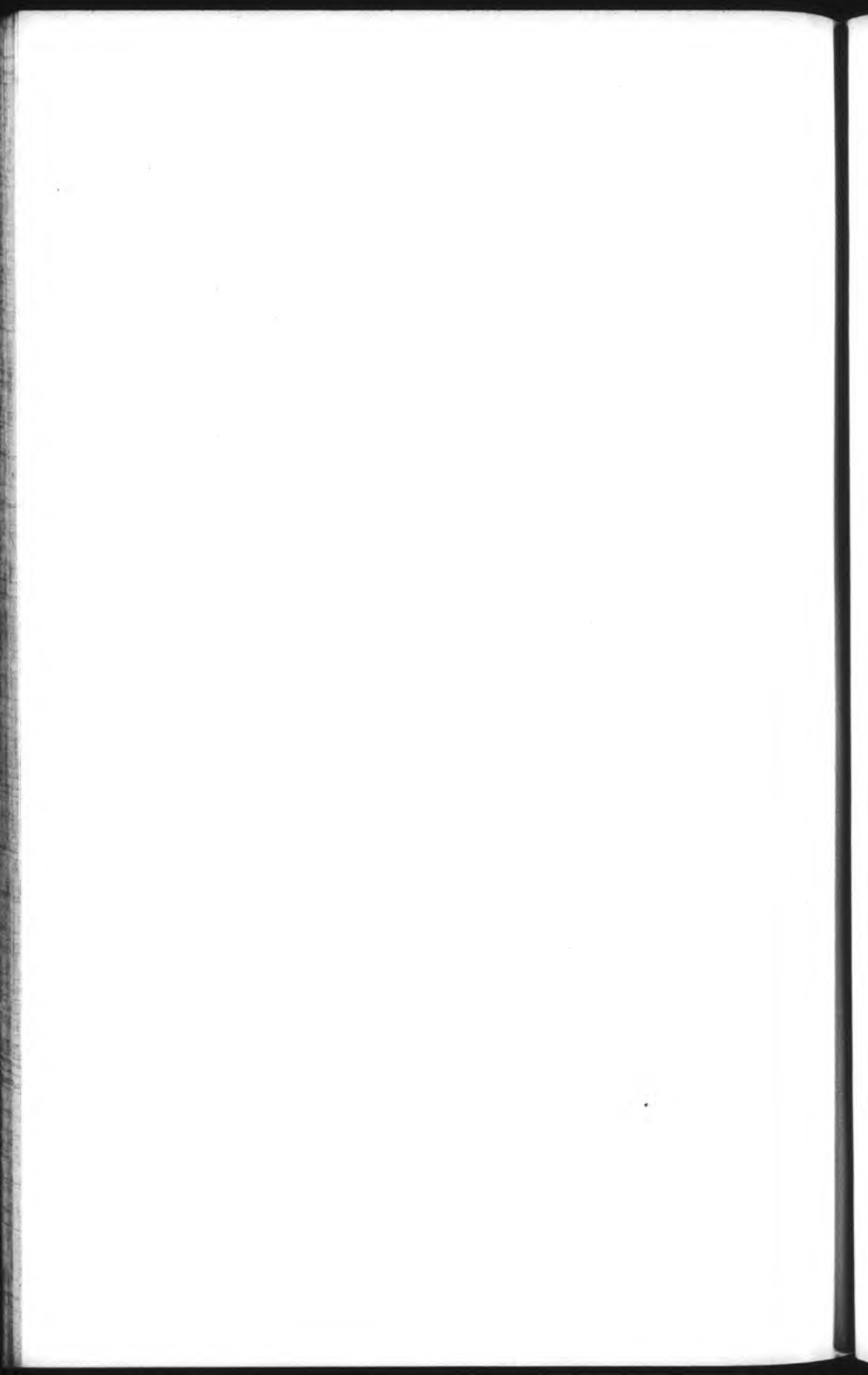
In February, 1919, this Act was amended by Congress, and an additional appropriation of \$200,000,000.00 was made, \$50,000,000.00 of which was to be available in 1919 and \$75,000,000.00 each in 1920 and 1921.

In November, 1921, Congress passed another Act which is known as the Federal Highway Act, in which a more systematic manner was prescribed for the administration of Federal funds. A National road system was provided for, to consist of 7 per cent of the road mileage of each State, three-sevenths of which is primary or interstate in character and four-sevenths secondary or intrastate in character. The primary or interstate roads shall receive not over 60 per cent of the money appropriated by Congress and the secondary not less than 40 per cent of such funds. This amendment carried an appropriation of \$75,000,000.00, \$25,000,000.00 of which was to be available in 1921, and \$50,000,000.00 in 1922. In June of 1922 a further amendment was added to the Federal Highway Act, appropriating \$50,000,000.00 for the year 1923, \$65,000,000.00 for 1924 and \$75,000,000.00 for 1925. Tables inserted herein will show the total amount of Federal aid appropriated by Congress to all the States of the Union, also the amount which has been allotted to the State of Florida as its pro rata share.

Another table shows how the money allotted to Florida has been distributed by this Department to the various projects. Also, the amount requested in each case and the amount granted by the Government, as well as the character of work to be done.



Project 4C-A, Road 4, Brevard County, between Sebastian and Melbourne. Rock Base with Priming Coat.



UNITED STATES BUREAU OF PUBLIC ROADS  
SUMMARY OF APPROPRIATIONS TO ALL THE STATES

Year	Law of 1916	Amendment 1919	Amendment 1921	Amendment 1922	Entire United States
1917 .....	\$ 5,000,000.00	\$ .....	\$ .....	\$ .....	\$ 5,000,000.00
1918 .....	10,000,000.00	.....	.....	.....	10,000,000.00
1919 .....	15,000,000.00	50,000,000.00	.....	.....	65,000,000.00
1920 .....	20,000,000.00	75,000,000.00	.....	.....	95,000,000.00
1921 .....	25,000,000.00	75,000,000.00	25,000,000.00	.....	125,000,000.00
1922 .....	.....	.....	50,000,000.00	.....	50,000,000.00
1923 .....	.....	.....	.....	50,000,000.00	50,000,000.00
1924 .....	.....	.....	.....	65,000,000.00	65,000,000.00
1925 .....	.....	.....	.....	75,000,000.00	75,000,000.00
Total .....	\$ 75,000,000.00	\$200,000,000.00	\$ 75,000,000.00	\$190,000,000.00	\$540,000,000.00

PRO RATA ALLOTTED TO FLORIDA

Year	Law of 1916	Amendment 1919	Amendment 1921	Amendment 1922	Total to Florida
1917 .....	\$ 55,976.27	\$ .....	\$ .....	\$ .....	\$ 55,976.27
1918 .....	111,952.54	.....	.....	.....	111,952.54
1919 .....	170,723.88	573,797.20	.....	.....	744,521.08
1920 .....	229,518.88	860,695.79	.....	.....	1,090,214.67
1921 .....	286,861.98	860,585.94	.....	.....	1,147,447.92
1922 .....	.....	.....	886,825.69	.....	886,825.69
1923 .....	.....	.....	.....	591,217.13	591,217.13
1924 .....	.....	.....	.....	771,395.18	771,395.18
1925 .....	.....	.....	.....	887,336.52	887,336.52
Total .....	\$ 855,033.55	\$ 2,295,078.93	\$ 886,825.69	\$ 2,249,948.83	\$ 6,286,887.00

RECORD OF FEDERAL AID PROJECTS TO DECEMBER 31, 1924

Road No.	Proj. No.	County	Length	Type	Total Cost Estimated	Amount Requested	Amount Granted
1	1	Okaloosa .....	10.45	S. C. ....	\$ 34,083.28	\$ 17,041.64	\$ 16,938.10
2	2	Osceola .....	4.12	Brick .....	69,678.53	20,000.00	20,000.00
1	3	Gadsden-Jackson .....	0.19	Conc. Arch .....	417,031.12	208,515.56	208,515.56
2	4	DeSoto .....	3.03	Concrete .....	66,005.98	30,000.00	30,000.00
18	5	DeSoto .....	2.50	Concrete .....	46,879.17	20,000.00	20,000.00
1	6	Madison .....	5.60	S. C. ....	25,829.23	12,914.61	12,914.61
2	7A-B	Hamilton .....	13.047	S. C. & C. Arch.....	279,448.84	139,724.42	139,724.52
2	8	Alachua .....	11.73	Bit. Mac. ....	217,155.38	108,577.69	108,577.69
1	9	Holmes .....	5.11	S. C. ....	25,525.06	12,762.53	12,762.53
1	11	Baker-Nassau-Duval ..	15.40	Concrete .....	563,421.41	281,710.70	281,710.70
2	13	Orange .....	8.59	Sheet Asphalt .....	305,686.15	152,843.07	152,943.07
1	14A-B	Santa Rosa .....	6.4	Brick, Conc. & Steel...	284,174.26	142,087.13	142,087.13
2	15	DeSoto .....	3.26	Concrete .....	54,570.67	20,000.00	20,000.00
18	16	DeSoto .....	0.67	Concrete .....	11,798.80	5,899.40	5,899.40
5	17	Manatee .....	7.87	Bit. Mac. ....	264,953.11	132,476.55	132,476.55
3	18	Putnam .....	12.79	Bit. Mac. ....	454,730.74	227,365.37	227,365.37
2	19-A	Hamilton .....	8.17	Graded }			
2	19-B	Hamilton .....	0.032	Concrete }	112,212.16	56,106.08	56,106.08
1	20	Holmes & Washington	0.38	Concrete .....	370,976.46	185,488.23	185,488.23
1	21-A	Baker .....	5.70	Concrete }			
1	21-B	Baker .....	0.064	Concrete }	234,656.07	117,328.03	117,328.03
1	22	Baker .....	8.90	Concrete .....	284,984.50	142,492.25	142,492.25
1	23	Duval .....	12.80	Concrete .....	467,017.29	233,508.64	233,508.64
1	24	Columbia .....	9.89	Bit. Mac. ....	348,171.92	174,085.96	174,085.96

2	26	Columbia .....	11.01	Concrete .....	370,697.14	178,358.52	178,358.52
2	27A-B	Columbia .....	12.36	Concrete .....	541,991.98	252,245.22	252,245.22
5	29A-B	Hillsborough .....	0.06	Concrete .....	148,680.79	74,340.39	74,340.39
2	30	Columbia-Hamilton ..	0.061	Conc. & Steel .....	63,033.24	26,991.69	26,991.69
2	31	Hamilton .....	11.81	Graded .....	69,362.04	34,681.02	34,681.02
4	32	Nassau .....	10.00	Bit. Mac. ....	369,717.21	184,858.60	184,858.60
2	33	Alachua .....	12.60	Bit. Mac. ....	358,844.39	179,422.19	179,422.19
7	34	Escambia .....	10.00	Concrete .....	297,291.77	148,645.88	148,645.88
1	35	Escambia .....	5.00	Concrete .....	152,411.86	76,205.93	76,205.93
4	36-A	St. Lucie .....	7.76	Bit. Mac. ....	277,105.50	138,462.20	138,462.20
4	36-B	St. Lucie .....	7.12	Concrete .....	288,228.60	142,420.00	142,420.00
2	37	Alachua .....	14.06	Sheet Asph. ....	686,547.72	297,888.00	297,888.00
1	38-A	Escambia .....	3.20	Tmb. Bdg., Apr. Embmt.	564,572.80	282,286.40	282,286.40
1	38-B	Escambia .....	0.29	Steel Bridge .....	289,113.77	144,556.88	.....
4	39A-B	Brevard & St. Lucie..	0.426	Conc. & Dredged Emb..	232,913.55	116,456.77	116,456.77
4	40-A	Brevard .....	16.169	Rock Base .....	446,546.93	223,273.46	223,273.46
4	40-D	Brevard .....	6.727	Rock Base .....	158,783.06	79,396.53	79,391.53
4	40-E	Brevard .....	13.596	Rock Base .....	315,218.29	157,609.14	157,609.14
2	43	Marion .....	10.534	Sheet Asph. ....	381,991.44	173,581.29	.....
2	44	Lake .....	10.529	Bit. Conc. ....	395,611.38	165,565.84	165,565.84
1	45	Suwannee & Madison.	0.173	Steel Brdg. & Conc. Apr.	124,902.27	62,451.13	.....
3	46	Nassau .....	11.526	Bit. Mac. ....	506,722.44	190,336.40	.....
4	47	St. Johns .....	14.88	.....	402,150.00	201,075.00	.....
4	48	St. Johns .....	15.68	.....	461,967.50	220,983.75	.....
4	49	Flagler .....	13.04	.....	335,132.50	167,566.25	.....
3	421	Nassau & Camden....	0.106	Conc. & Steel .....	186,078.86	93,039.43	.....
		Total .....	375.42		\$13,364,607.16	\$ 6,453,620.77	\$ 5,199,927.10

## BRIDGE DEPARTMENT

The duties of the Bridge Department are to prepare complete designs and specifications for all bridges, culverts and miscellaneous structures entering into the construction of the State System of Roads, and to have general charge of the work as it progresses.

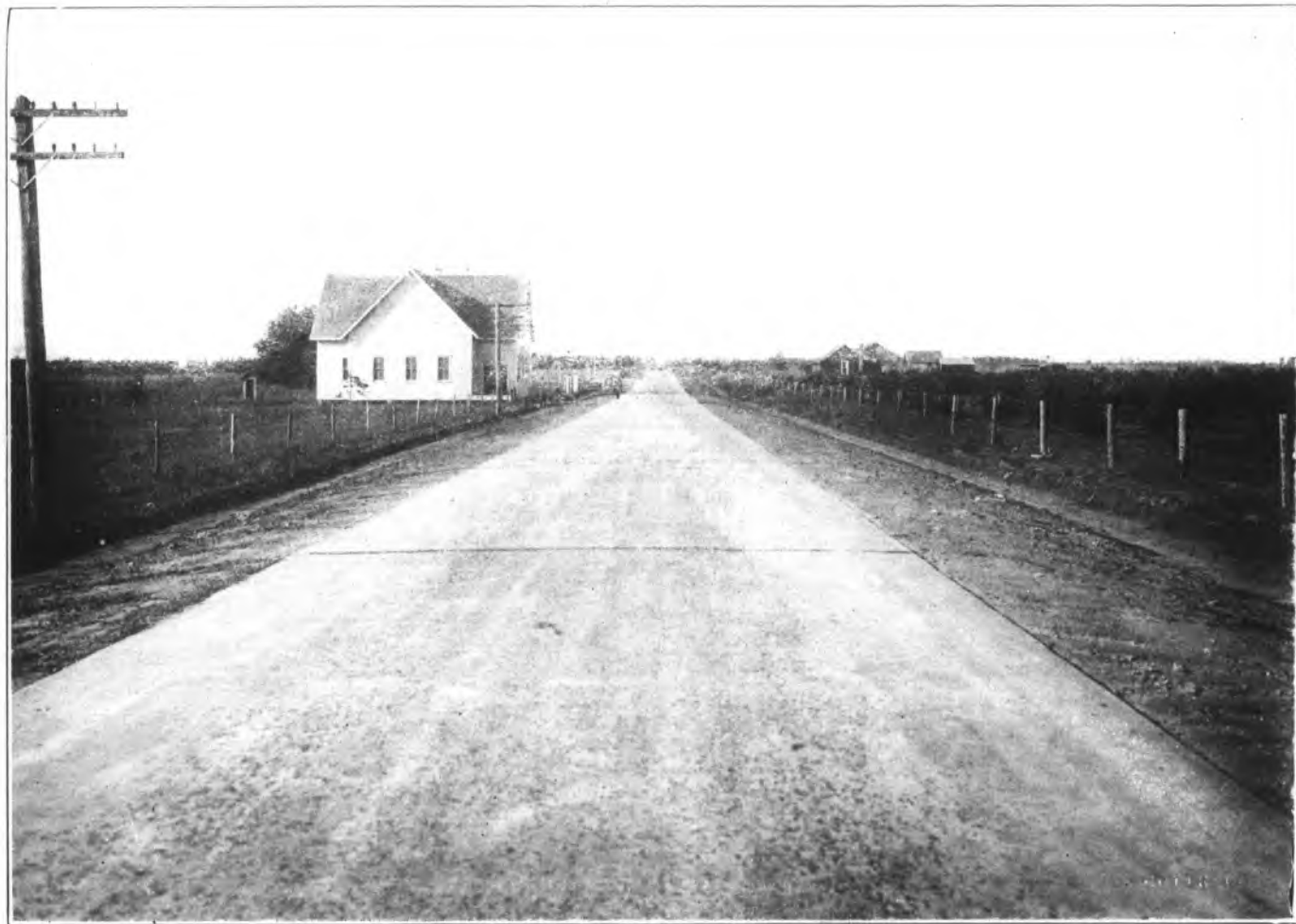
The character of bridges designed and constructed by the State Road Department is of the highest standard of modern practice in highway bridge engineering. Special effort is made to obtain the best foundations possible by very careful foundation surveys, consisting of borings, test piles, etc.

A twenty-foot clear roadway, between curbs, has been used as a standard for bridges built by the Department, but in some instances bridges with twenty-four and thirty-foot roadways have been built, and in a few cases sidewalks have been added for the safety and convenience of pedestrians.

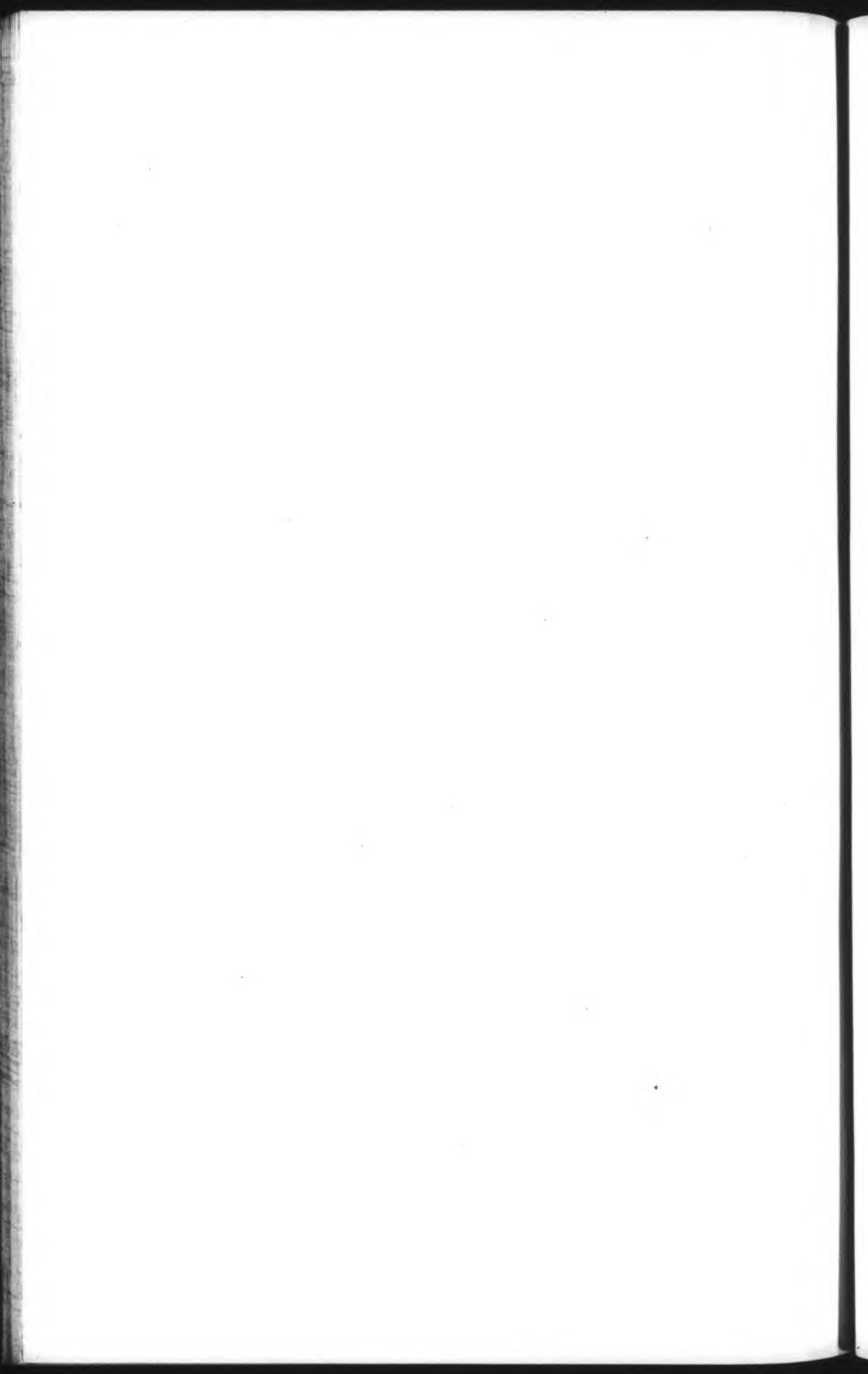
When funds were limited to such an extent as not to allow for the construction of more permanent bridges, creosoted timber was used. A bridge constructed of creosoted timber receives the same careful inspection as if it were of the highest type. All the materials entering into the construction of any bridge is carefully inspected and tests are made of them before being used.

One of the most important bridge projects which has been undertaken by the Department is the crossing of the Escambia Bay, between Milton and Pensacola. This is a Federal-aid project, having a total length of 3.49 miles, which is made up of eight creosoted timber bridges, two creosoted timber approaches, a steel structure over the main channel and earth embankment. The total length of the timber structures is five thousand eight hundred and sixty-five feet, and that of the steel structure is five hundred and twenty-eight feet. The nine bridges in this project are connected with filled embankment thirty feet wide





An Orange Grove along a State Highway in West Florida.



on top, with a two-to-one slope on either side. It is estimated that it will require 470,000 cubic yards of earth to make this embankment, which material is being gotten from a pit on the east side of the bay and is being hauled in on the east side of the bay and is being hauled in on cars and dumped in place. On account of probable damage by high tides and wave action caused by wind, a creosoted timber protection wall is being placed along the toe of the embankment where any damage is likely to occur. The timber which is being used in all this work is of the best grade of yellow pine. The piling used in this project is impregnated with twenty-two pounds of creosote oil, while the structural timber with twelve pounds.

Across the main channel of Escambia River will be constructed a steel bridge on concrete piers. This steel bridge consists of four low truss spans, eighty feet each in length, and one two-hundred-foot swing span. This swing span allows for a clear channel of eighty feet on either side of the pivot pier. The estimated cost of this project when complete, without the pavement, is \$853,686.57.

Another bridge which I will refer to that has recently been begun is the one across the Manatee River, between Palmetto and Bradenton. This project is 5,200 feet in length. The bridge proper consists of one hundred and sixteen reinforced deck girder spans of thirty feet in length each, and one double-leaf bascule lift span, which provides for a clear channel opening of seventy-five feet. This bridge will have a twenty-four-foot clear roadway, with a four and one-half-foot sidewalk on either side. Due to the fact that this bridge crosses a salt-water stream, great care was taken in the specifications and design to prevent possible corrosion of the materials entering into its construction. The concrete to be used is that of a very rich mixture, and all reinforcing steel is so placed in the structure that none of it is closer to exposed surfaces than four inches. To further safeguard against possible deterioration, ten coats

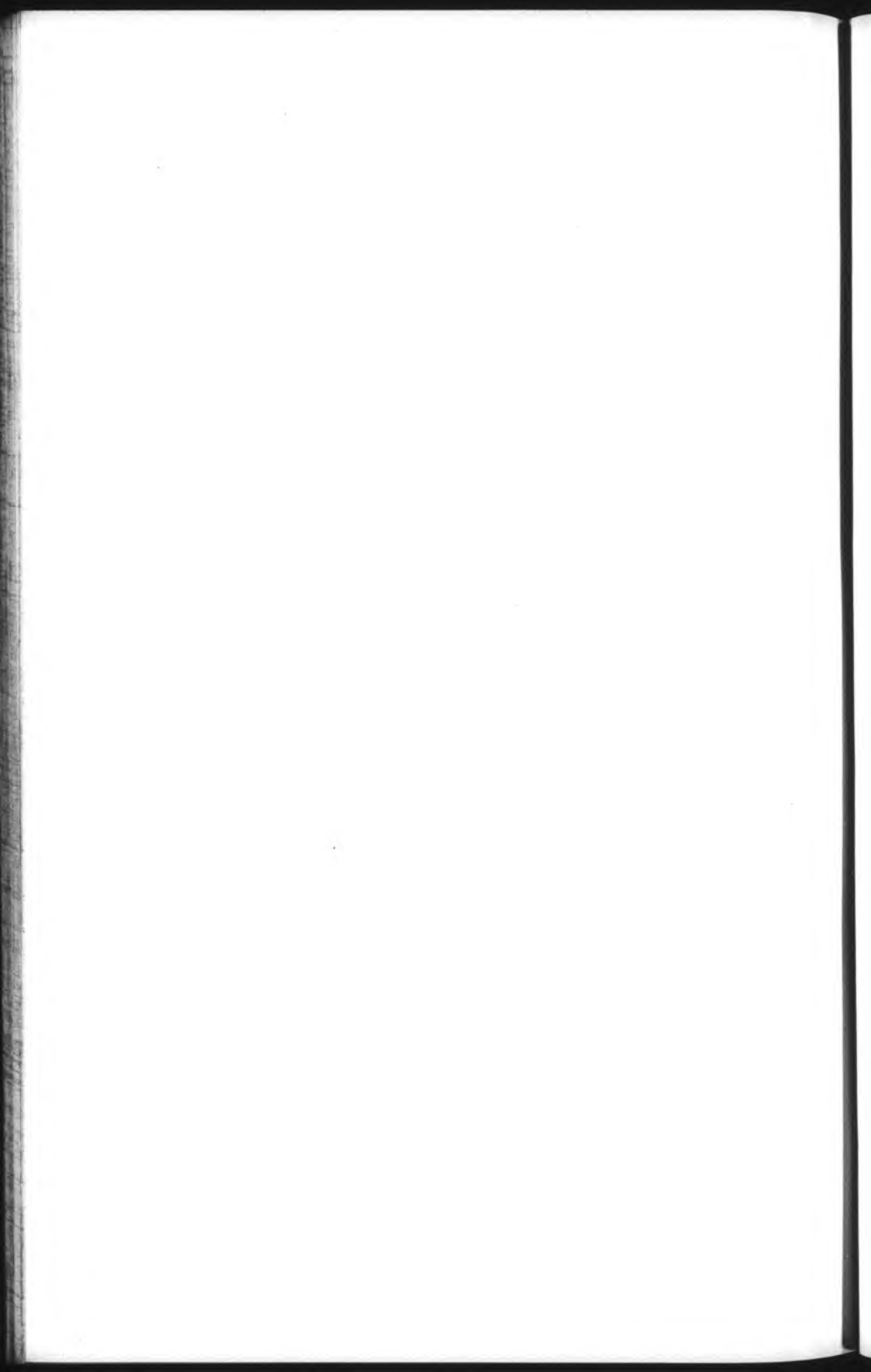
of a special waterproofing material will be applied to all surfaces which may come in contact with sea water.

The estimated cost of this bridge is \$842,330.50. The approaches to the bridge will be embankments constructed with material pumped from the river bed. The cost of the approaches will be borne by the county.

During the past two years designs have been made for ninety-seven bridges over twenty feet in length. Thirty-eight of these were for reinforced structures, one for steel bridge on concrete foundation with reinforced concrete approaches, two were for steel bridges with creosoted timber approaches, and fifty-six were for creosoted timber bridges throughout. A tabulation herein inserted shows the location of the bridges for which designs were made as well as the lengths.



A stretch of Surface-treated Lime Rock Macadam on State Road No. 2



PLANS FOR BRIDGES 20 FEET AND OVER IN LENGTH  
Prepared by Bridge Department 1923-24

Road No.	Proj. No.	COUNTY	No. of Bridges	Type of Bridge			Total Length
				Concrete	Steel	Timber	
1	38	Escambia-Santa Rosa .....	9		528	5,565	6,093
1	45	Suwannee-Madison .....	1	546	364		910
1	568	Jackson .....	1			3,315	3,315
1	571	Madison .....	1			30	30
1	579	Holmes .....	3			1,005	1,005
1	586	Jackson .....	4	80			80
1	598	Jefferson .....	5			450	450
1	612	Leon .....	4			240	240
2	27	Columbia .....	3	76			76
2	37	Alachua .....	2	72			72
2	505	Columbia .....	1	48			48
2	563	Osceola .....	2			315	315
3	46	Nassau .....	3	130			130
4	36	St. Lucie .....	1	66			66
4	39	St. Lucie-Brevard .....	1	901			901
4	40	Brevard .....	6	212			212
4	47	St. Johns .....	3	112			112
4	507	Flagler .....	4			195	195
4	521	Nassau .....	3	218			218
4	597	Volusia .....	1	20			20
4	601	St. Johns .....	3			665	665
4	608	Brevard .....	2	44			44
4	620	St. Lucie .....	1			45	45
5	544	Pasco .....	1	20			20
5	564	Charlotte .....	13			465	465
5	570	Manatee .....	1	64			64
5	576	Sarasota .....	3			140	140
5	583	Hillsborough .....	1	170			170
5	593	Manatee .....	1	3600			3,600
5	613	Sarasota .....	1	32			32
5	635	Manatee .....	2	48			48
8	562	Highlands .....	2			405	405
8	582	Highlands-Okeechobee ....	1		152	2,970	3,122
24	534	Brevard .....	2			765	765
RAILROAD OVERHEAD CROSSINGS							
1	565	Madison .....	1			108	108
1	579	Holmes .....	1			110	110
1	612	Leon .....	1			110	110
2	43	Marion .....	1	120			120
5	545	Hernando .....	1			183	183
		Total .....	97	6659	964	17,081	24,704

All projects having numbers less than 500 are Federal Aid Projects and those from 500 up are State Aid Projects.

## BRIDGE CONSTRUCTION

Drainage of a road is one of the most essential items, and this is especially true of Florida, where the rainfall is excessive and the run-off is slow. This Department has paid more attention to this one item than probably to anything else connected with road building. When the surveys are made for the road a drainage survey is made also which will show the amount of land drained by each branch or creek which the road will cross. The drainage areas are calculated, and a culvert or bridge is designed for each separate place, and in doing so culverts or bridges of the proper size are constructed. Unless this information is obtained a culvert or bridge too small to carry the water may be constructed, or one much too large, which would be a needless expense in either case. All available data is secured before the final plans for any construction work is begun, and it has been proven conclusively that the usual stitch in time has many times saved more than nine.

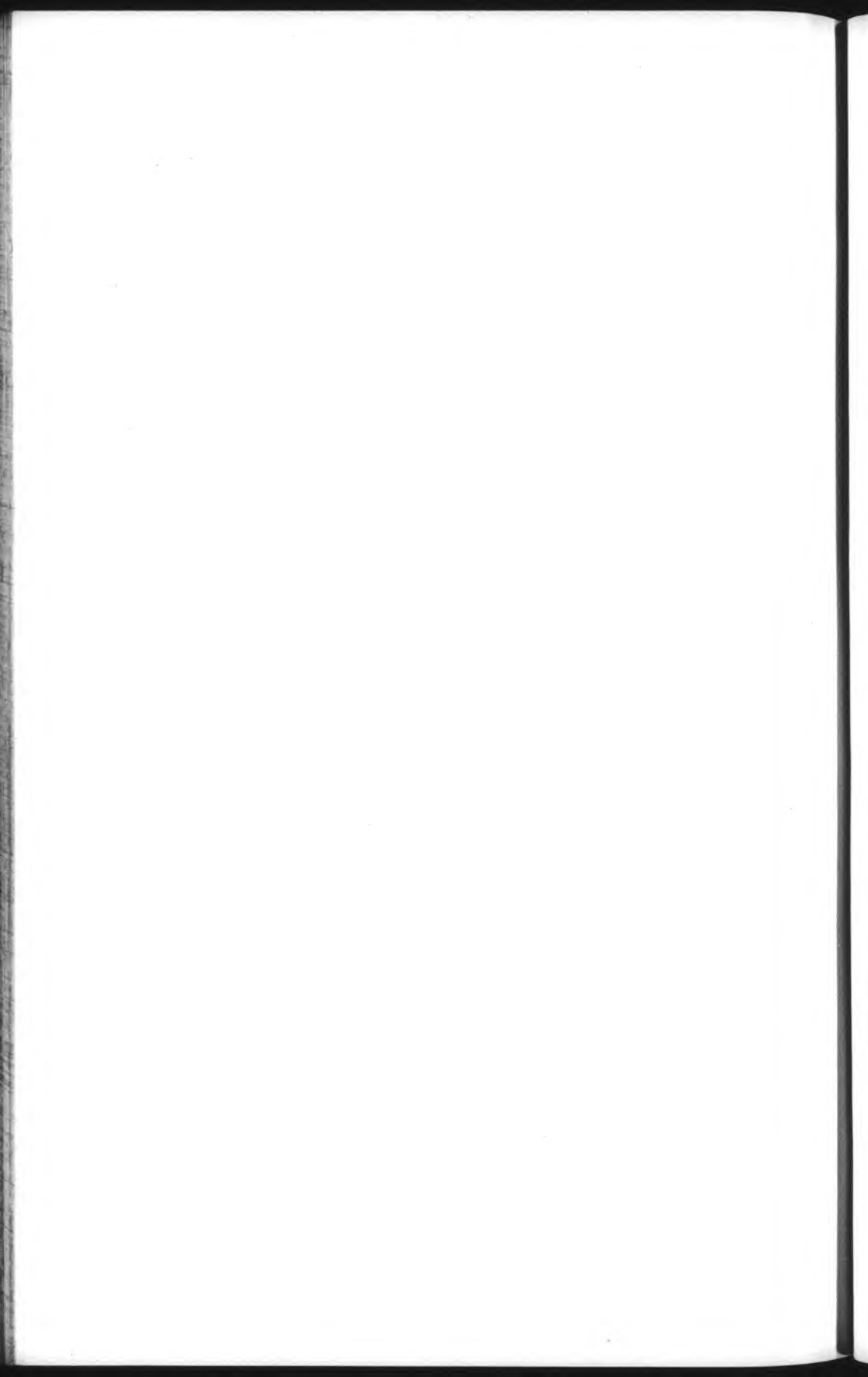
In the building of bridges the Department has adopted standards which are equal to those used by any other State in the Union. Our first idea is permanence, and in most cases the bridges which are being built today will no doubt outlive the memory of many of us who are instrumental in their construction. When what might be termed a permanent bridge cannot be built on account of the lack of funds, a bridge of a semi-permanent type is constructed, which will last for many years and at least until sufficient funds will be available to reconstruct one of a more permanent type.

Up to December 31st, 1924, this Department has completed 14,596 linear feet of bridge projects, at a cost of \$1,932,426.21; of this length 9,367 feet is concrete, 695 feet steel and 3,934 is creosoted timber. There are at present under construction 18,828 linear feet of bridges, the estimated cost of which is \$2,469,317.56. Of this total length under construction, 4,753 feet are of concrete, 2,064 feet of





Bridge across Suwannee River near White Springs, Federal Aid Project No. 30.



steel and 14,011 feet of creosoted timber. Tables inserted in this Report will show in detail the bridge work completed as well as that now under construction. The bridge work referred to does not include the numerous small drainage structures which are necessary in the construction of the roads, but includes only those which are of such size as to be contracted separately as bridge contracts. The small drainage structures not classed as bridge projects are included in the contracts awarded for roads. Various counties have contributed \$316,321.31 for bridge work, completed and under construction.

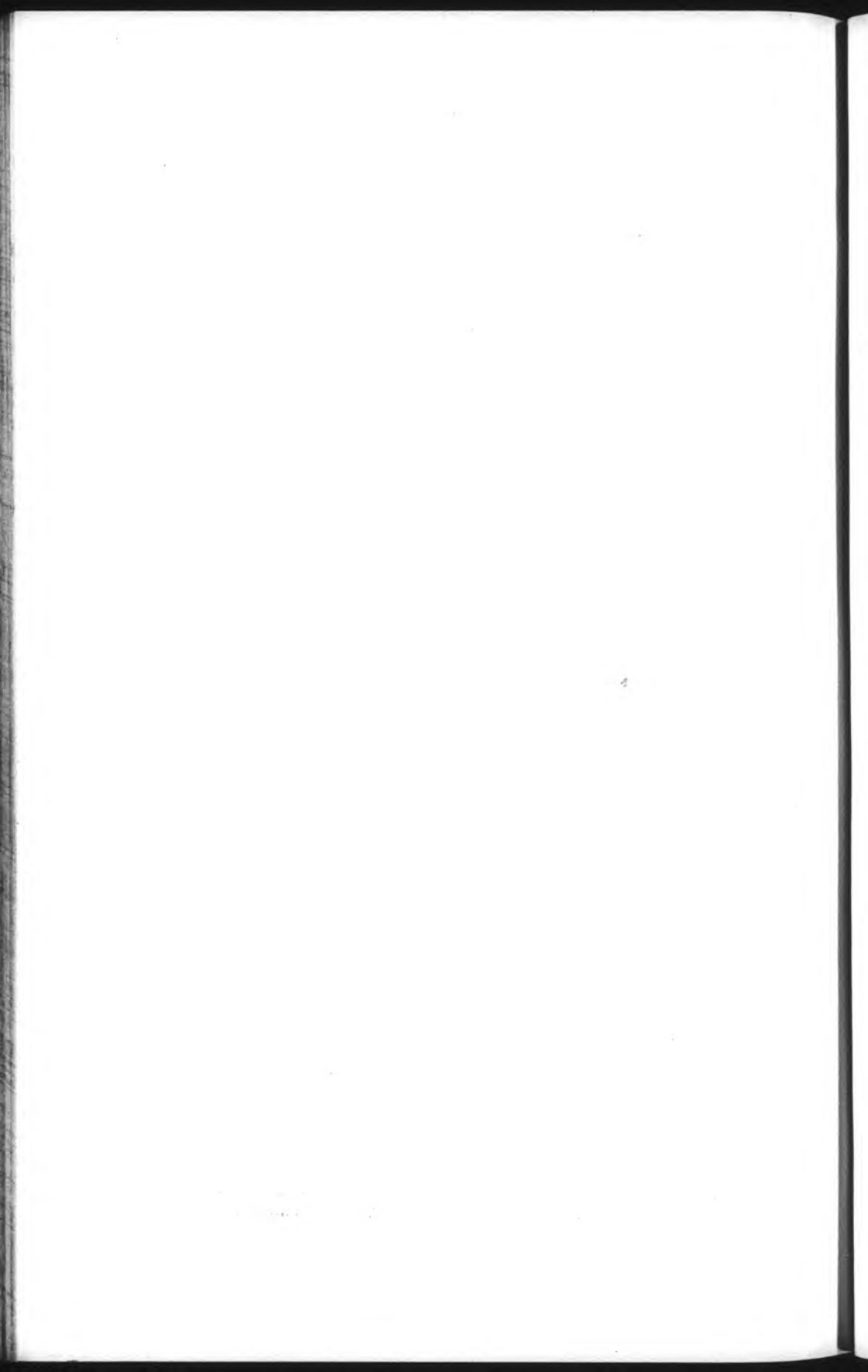
FLORIDA STATE ROAD DEPARTMENT  
Bridges Completed December 31st, 1924

Road No.	Project No.	COUNTY	Length Feet	TYPE	Total Cost	Participation County
1	3	Gadsden-Jackson .....	2,627	Concrete .....	\$ 690,619.90	\$ 60,000.00
2	7-B	Hamilton .....	476	Concrete and Steel.....	174,078.24	61,025.11
1	14-B	Santa Rosa .....	370	Steel .....	167,955.01	.....
2	19	Hamilton .....	106	Concrete .....	20,359.37	8,150.00
1	21-B	Baker .....	340	Concrete .....	40,778.78	.....
5	29 A	Hillsborough .....	316	Concrete .....	69,890.79	.....
5	29-B	Hillsborough .....	215	Concrete .....	83,455.47	.....
2	30	Columbia-Hamilton .....	325	Concrete and Steel.....	61,996.95	21,370.00
1	509	Gadsden .....	115	Timber .....	4,845.98	.....
1	517	Jefferson .....	90	Timber .....	4,564.13	.....
15	526	Pinellas .....	2,500	Concrete .....	251,202.22	.....
17	527	Pinellas .....	2,833	Concrete .....	162,297.03	.....
4	559	Brevard .....	260	Concrete .....	10,000.00	.....
2	563	Osceola .....	315	Timber .....	9,456.02	.....
0	566	Lake .....	223	Timber .....	6,493.83	.....
1	568	Jackson .....	3,315	Timber .....	109,552.65	.....
5	583	Hillsborough .....	170	Concrete .....	64,179.84	.....
		Totals .....	14,596		\$ 1,932,426.21	\$ 150,545.11

Note: Projects less than 500, Federal Aid.  
Projects above 500, State Aid.



A section of surface-treated Florida Lime Rock Base on State Road No. 2, built with State Forces.



FLORIDA STATE ROAD DEPARTMENT  
Bridges Under Construction

Road No.	Project No.	COUNTY	Length Feet	Type	Cost Estimated	Spent to Date Amount	Participation County
1	20	Holmes & Washington.	2,473	Steel and Timber.....	\$ 370,976.46	\$ 309,186.56	\$ 50,000.00
4	36-A	St. Lucie .....	72	Concrete .....	16,322.04	10,305.70	.....
2	37-D	Alachua .....	60	Concrete .....	31,552.40	2,947.20	.....
1	38-A-B	Escambia .....	6,085	Steel and Timber.....	635,226.57	72,984.59	100,000.00
4	39-A-B	Brevard .....	901	Concrete .....	187,346.50	170,027.44	.....
1	45	Suwannee .....	912	Concrete and Steel....	124,902.25	929.97	.....
2	43	Marion .....	120	Concrete .....	18,903.50	0.00	.....
24	534	Brevard .....	765	Timber .....	28,846.40	4,146.26	.....
5	545	Hernando .....	185	Timber .....	8,302.25	0.00	.....
8	582	Highlands .....	3,125	Steel and Timber.....	177,941.61	5,325.67	.....
5	593	Manatee .....	3,600	Concrete .....	842,330.50	4,083.44	.....
4	601	St. Johns .....	480	Timber .....	22,994.18	15,706.06	.....
4	620	St. Lucie .....	45	Timber .....	3,672.90	605.07	.....
		Totals .....	18,828		\$ 2,469,317.56	\$ 596,247.96	\$ 165,776.20

Note: Projects less than 500, Federal Aid.  
Projects above 500, State Aid.

## ROAD CONSTRUCTION

The roads completed, and those now under construction in this State, are divided into two classes, one class designated as Federal-Aid Projects, and one designated as State or State-Aid Projects. The Federal-aid projects are those constructed by the State in cooperation with the Bureau of Public Roads, and are designated by numbers less than 500. State or State-aid projects are those constructed entirely with State funds or with State and county funds, and are designated by numbers greater than 500. Specifications governing the work to be done by this Department are the same whether Federal aid or State aid.

At the last session of the Florida Legislature an Act was passed designating a State System of Roads, and providing that all work done by the State Road Department should be confined to a certain portion of this system until the same was completed. This Act, however, recognized such contracts and agreements which were in effect at the time of its passage, and allowed the Department the privilege of carrying out such contracts or agreements, even though they were for work not on this preferred trunk line system, and all work undertaken by the Department within the past two years has been in conformity to this Act, a copy of which may be found in this Report.

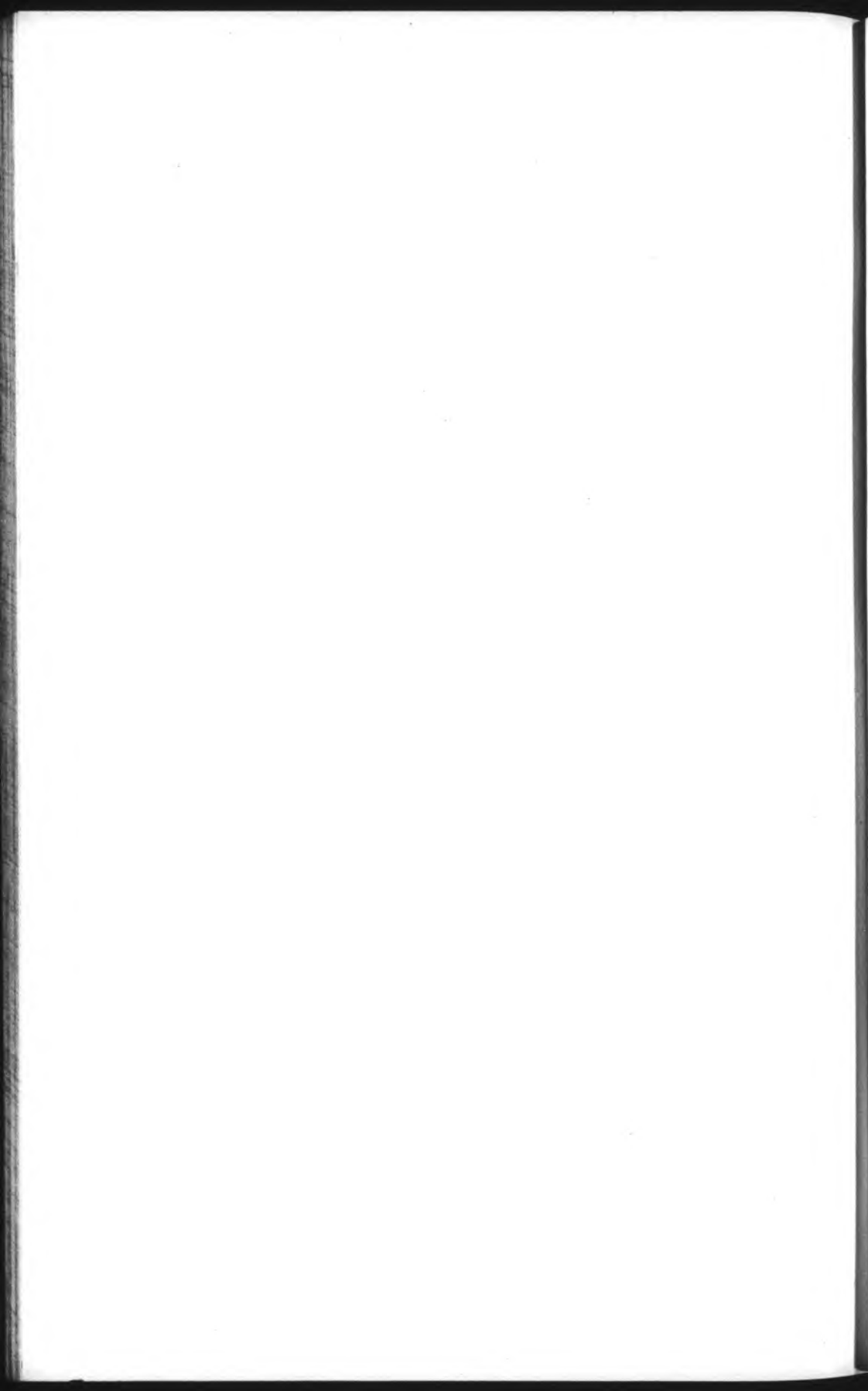
In constructing roads in Florida, one encounters conditions which probably do not exist anywhere else in the United States. The soil conditions are very different, the rainfall is more excessive, and the general topography of the country does not lend itself easily to the construction of roads. For a number of years, practically all the materials used in the construction of roads were imported from other States, but experiments have demonstrated that the State of Florida has an abundance of excellent road-building materials, and at the present time local materials to a large extent are being used throughout the State. One of the big industries of Florida is the production of lime rock





*PROJ. 568-Rd. 1-Jackson Co.  
Pope Lake Bridge*

Pope Lake Bridge on Road No. 1, Jackson County.



for roads, which has been the means of getting a very much increased road mileage for the money available.

During the year 1923, Florida lime rock was used in the construction of approximately 70 per cent of the mileage of hard-surfaced roads constructed by this Department, and in 1924 this increased to something over 90 per cent, showing that local materials have taken the place of imported materials, and it is evident the quality of work done has not decreased. Florida lime rock has been used very successfully as a base for brick, sheet asphalt, asphaltic concrete, bituminous macadam, as well as an excellent pavement where surface treatment is used. A cut showing the typical sections designed by this Department and approved by the Bureau of Public Roads of the various types of pavements is shown in this Report. This will give a very clear idea of the manner in which each type is constructed.

As is noted in the report for work done by convict labor, the roads thus constructed are either graded roads or sand-clay roads. This is just the first step in the construction of a hard-surfaced road. It has been clearly demonstrated that in order to get the best results in constructing hard surfaces the sub-grade should be thoroughly seasoned or settled. No better plan can be adopted to the writer's mind than to construct first a sand-clay road, providing clay is accessible; then, after a year or two, pave with some type of hard surface. This serves a double purpose: it gives the road a chance to settle and at the same time provides a reasonably good road for public use while this seasoning takes place. Another class of stage construction has been adopted by this Department, when sufficient funds are not available to construct a finished road with a high-type wearing surface such as sheet asphalt or asphaltic concrete. In a great many cases the Department has constructed a standard grade, with the necessary drainage structures, then built an eight-inch rock base, which is the standard of the Department, and instead of constructing what might be termed a permanent wearing surface, a surface treat-

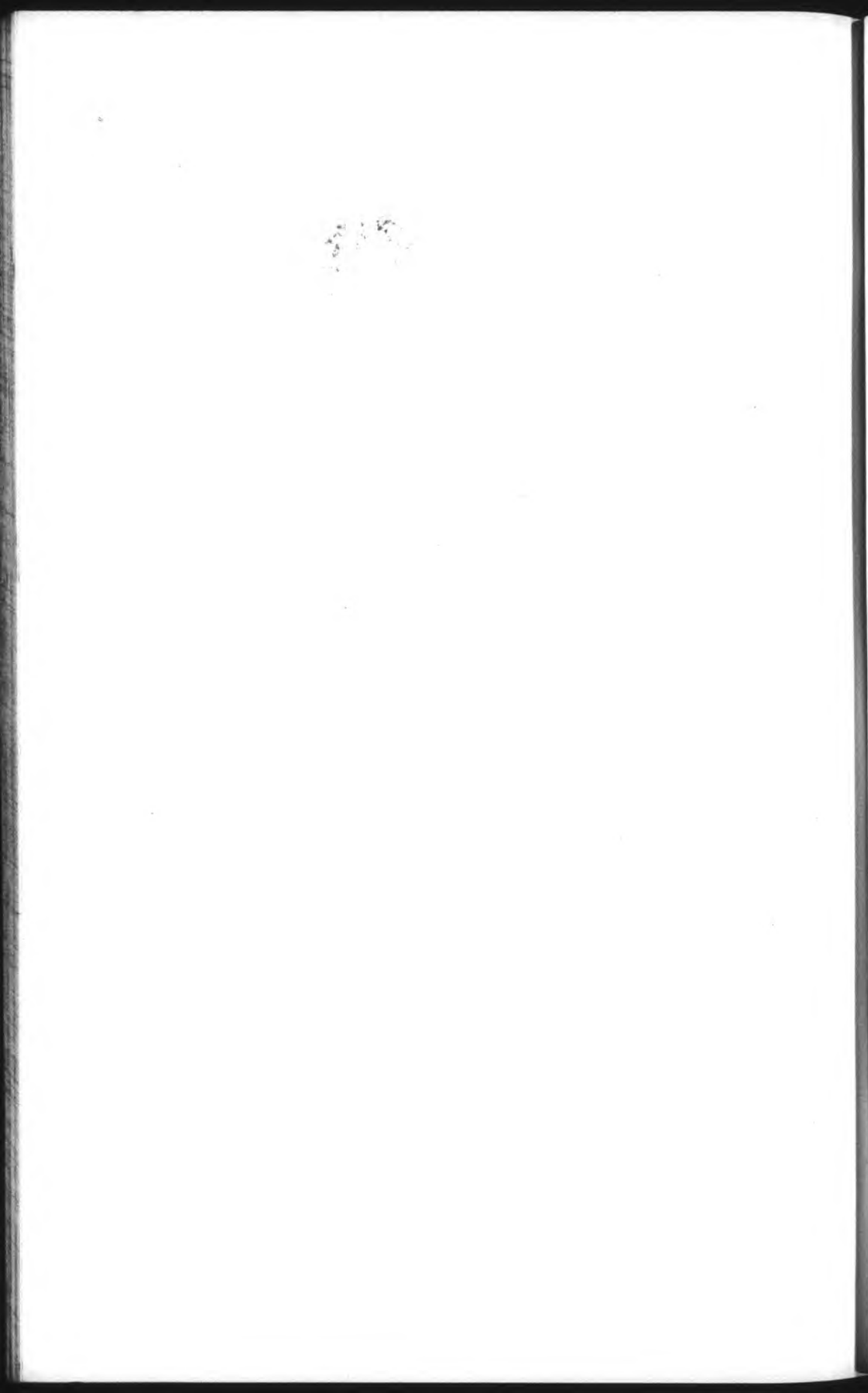
ment of asphalt and stone or slag chips is applied to the base. This makes a road which will give excellent service for a number of years, and can later be surfaced with a better type, with no loss to the State whatever in the first investment. In this Report you will notice photographs which will verify this statement, and the roads themselves have been in use long enough to prove conclusively that it is economical. The Federal Bureau of Public Roads has also given approval of this plan of construction, inasmuch as it is participating at the present time in the construction of several miles of road in this State under this stage construction plan.

You will note that at the present time this Department is constructing roads of many types, and it might be of interest to know why such is the case. In the first place, let me say that there are several types of high-type hard-surfaced pavements which are about equal in value, and it is of little consequence as to which type you select. The Department in asking for bids on work asks that bids be given on any or all of the standard types, and the prices bid usually determine the type to be used. In some localities the materials entering into the construction of one type of road are cheaper than for another type of equal value, and in some cases this rule is reversed, hence the Department in trying to get the best value for the money spent takes advantage of this condition in awarding contracts for work.

Up to December 31st, 1924, the Department has completed road projects aggregating 747.78 miles in length, which does not include the projects which were under construction on that date. Of this total mileage of completed projects, 105.12 miles are concrete, 40.93 miles of sheet asphalt on a lime rock base, 23.20 miles of asphalt block, 71.50 miles of bituminous macadam, 12.44 miles of brick, 188.73 miles of surface-treated macadam, 277.52 miles of sand-clay and 28.34 miles of marl surfacing. The total cost of the 747.78 miles of completed projects is \$12,074,883.36,



Plain Cement Concrete Pavement, Federal Aid Project No. 36, Road No. 4, St. Lucie County.

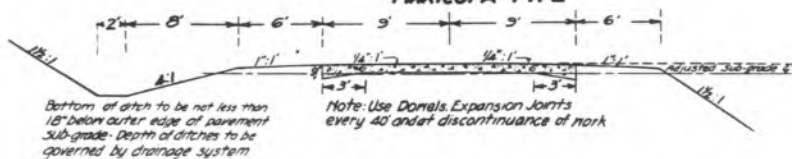


\$3,200,399.09 of which amount was contributed by the various counties in which the work was done.

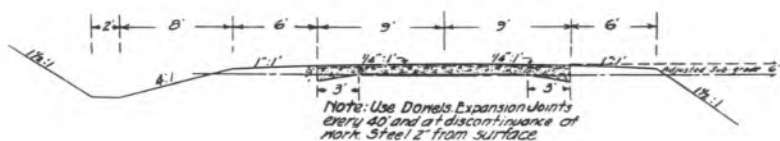
On January 1st of this year there were under construction road projects totaling 414.68 miles in length, comprised of the following: 20.3 miles of concrete, 10.74 miles of bituminous concrete, 14.92 miles of sheet asphalt, 171.69 miles of surface-treated macadam, 182.93 miles of sand-clay and 14.10 miles of marl surface, at an estimated cost of \$7,461,410.56, of which amount \$1,327,488.23 is being contributed by the various counties in which the work is being done. Of this total of 414.68 miles of road projects under construction on January 1st, 134 miles were completed on that date but were not included in the above mentioned total miles of completed projects. Tabulations are shown in this Report giving the details of both completed projects and those under construction.

## TYPICAL CROSS SECTIONS

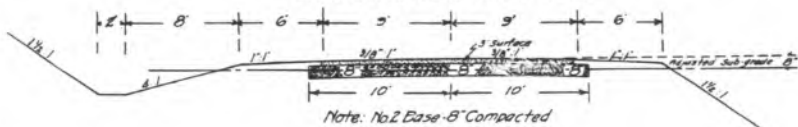
### PLAIN CONCRETE SURFACE MARICOPA TYPE



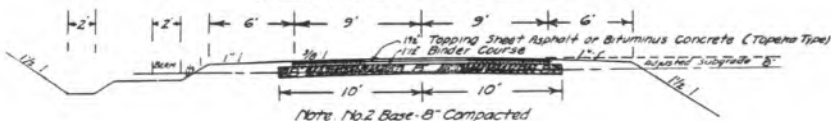
### REINFORCED CONCRETE SURFACE



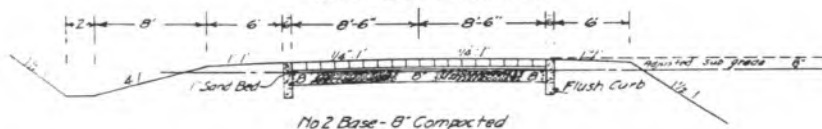
### BITUMINOUS MACADAM SURFACE



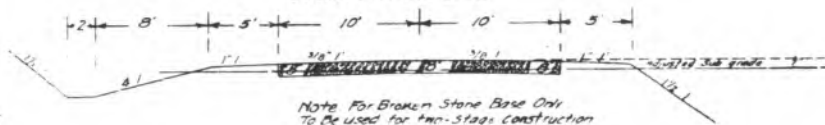
### SHEET ASPHALT OR BITUMINOUS CONCRETE



### VITRIFIED BRICK SURFACE



### BROKEN STONE BASE





FLORIDA STATE ROAD DEPARTMENT  
Road Projects Completed to December 31st, 1924

Road No.	Project No.	COUNTY	Length	Type	Total Cost	County Participation
1	1	Okaloosa .....	10.40	Sand Clay .....	\$ 33,962.84	\$ 9,989.40
2	2	Osceola .....	4.13	Brick .....	125,693.90	15,783.38
2	4	DeSoto .....	3.03	Concrete .....	92,576.69	17,017.12
18	5	DeSoto .....	2.50	Concrete .....	50,431.49	12,042.38
1	6	Madison .....	5.60	Sand Clay .....	44,491.20	2,500.00
2	7-A	Hamilton .....	13.00	Sand Clay .....	51,065.00	20,425.00
2	8	Alachua .....	11.73	Bit. Mac. ....	251,359.42	49,918.10
1	9	Holmes .....	10.00	Sand Clay .....	50,611.12	9,987.49
1	11	Baker, Nassau, Duval.....	15.39	Concrete .....	451,805.00	19,393.03
2	13	Orange .....	8.59	Sheet Asphalt .....	287,517.51	.....
1	14	Santa Rosa .....	6.31	Brick .....	135,522.26	64,546.27
2	15	DeSoto .....	3.28	Concrete .....	70,356.13	16,000.00
18	16	DeSoto .....	9.17	Concrete .....	127,133.45	95,680.62
5	17	Manatee .....	7.87	Bit. Mac. ....	201,528.43	100,000.00
3	18	Putnam .....	12.80	Bit. Mac. ....	456,110.33	143,543.42
2	19	Hamilton .....	8.20	Sand Clay .....	53,979.28	21,600.00
1	21	Baker .....	5.68	Concrete .....	171,730.40	19,393.02
1	22	Baker .....	8.90	Concrete .....	250,774.05	16,333.03
1	23	Duval .....	12.80	Concrete .....	440,037.98	.....
1	24	Columbia .....	9.89	Concrete .....	295,706.67	88,700.00
2	27	Columbia .....	12.36	Concrete .....	516,981.98	154,800.00
2	31	Hamilton .....	11.86	Sand Clay .....	82,073.68	32,825.00
4	32	Nassau .....	10.00	Bit. Mac. ....	367,133.76	.....
2	33	Alachua .....	12.60	Bit. Mac. ....	373,977.67	177,467.14
7	34	Escambia .....	10.00	Concrete .....	285,409.07	139,901.08

FLORIDA STATE ROAD DEPARTMENT  
Road Projects Completed to December 31st, 1924—Continued.

Road No.	Project No.	COUNTY	Length	Type	Total Cost	County Participation
1	35	Escambia .....	5.00	Concrete .....	148,494.40	84,950.54
4	36-A	St. Lucie .....	7.76	Bit. Mac. ....	232,186.69	51,450.00
4	36-B	St. Lucie .....	7.12	Concrete .....	239,930.35	51,450.00
2	37A C	Alachua .....	4.16	Sheet Asphalt .....	171,145.32	85,572.66
2	37-E	Alachua .....	7.96	Sheet Asphalt .....	328,977.98	164,488.99
20	500	Bay .....	45.00	Sand Clay .....	150,174.81	.....
6	501	Calhoun .....	44.00	Sand Clay .....	125,038.30	50,739.96
6	502	Calhoun .....	7.50	Sand Clay .....	47,210.59	21,770.40
2	503	Charlotte .....	8.70	Marl .....	141,530.13	.....
1	504	Columbia .....	9.15	Sand Clay .....	48,198.14	14,460.00
2	505	Columbia .....	11.80	Surf. Treat. ....	217,864.19	65,350.00
4	507	Flagler .....	9.00	Surf. Treat. ....	240,123.78	28,500.00
5	510	Hillsborough .....	9.20	Asph. Block .....	255,976.44	.....
5	511	Hillsborough .....	11.00	Asph. Block .....	140,468.85	.....
5	512	Hillsborough .....	3.00	Asph. Block .....	21,492.56	.....
20	515	Jackson .....	15.00	Sand Clay .....	114,508.19	.....
29	518	LaFayette .....	15.00	Sand Clay .....	6,452.17	.....
5	519	Manatee .....	3.50	Bit. Mac. ....	69,762.28	.....
2	520	Marion .....	15.53	Surf. Treat. ....	255,532.58	176,755.76
8	523	Okeechobee .....	18.46	Surf. Treat. ....	440,873.78	345,605.02
1	529	Suwannee .....	12.14	Sand Clay .....	70,213.06	.....
29	531	Taylor .....	8.00	Sand Clay .....	941.75	.....
3	532	Volusia .....	18.32	Surf. Treat. ....	332,255.78	133,332.27
1	533	Suwannee .....	13.47	Sand Clay .....	90,614.44	.....
29	535	LaFayette .....	8.00	Sand Clay .....	6,452.17	.....

1	536	Gadsden	5.50	Sand Clay	36,790.91	10,000.00
23	537*	Marion	6.93	Graded	15,462.00	
2	538	Marion	10.90	Surf. Treat.	181,227.44	113,210.18
5	539	Marion	11.30	Surf. Treat.	87,624.13	66,150.85
5	544	Pasco	20.08	Surf. Treat.	457,778.80	
5	545	Hernando	9.51	Sheet Asphalt	312,063.37	100,030.00
4	546	Brevard	5.00	Surf. Treat.	124,347.73	25,469.09
5	548	Levy	20.60	Surf. Treat.	46,462.01	
2	553	Marion	9.15	Surf. Treat.	135,809.52	83,194.36
4	554	Brevard	5.00	Surf. Treat.	121,158.52	25,496.08
1	557	Gadsden	.06	Sand Clay	2,100.00	
6	560	Calhoun	20.00	Sand Clay	82,474.00	29,826.90
8	562-A	Highlands	5.37	Marl	56,022.79	
8	562-B	Highlands	10.71	Sheet Asphalt	350,579.99	
1	565	Madison	15.64	Sand Clay	155,109.75	
5	570	Manatee	3.96	Bit. Mac.	150,391.74	
13	572	Bradford	7.00	Surf. Treat.	138,065.62	92,421.88
3	575	Putnam	5.46	Surf. Treat.	180,574.00	
24	584	Osceola	2.00	Brick	45,608.33	
5	589	Lee	8.27	Marl	25,004.50	
13	594	Bradford	9.10	Surf. Treat.	128,870.93	107,770.28
13	607	Bradford	5.10	Surf. Treat.	88,624.25	44,561.39
8	629	Highlands	6.00	Marl	31,424.91	
5	535	Manatee	1.28	Bit. Mac.	28,920.08	
Totals			747.78		\$12,074,883.36	\$ 3,200,399.09

\*County completed.

Note: Projects less than 500, Federal Aid.  
Projects more than 500, State Aid.

FLORIDA STATE ROAD DEPARTMENT  
Road Projects Under Construction January 1st, 1925

Road No.	Project No.	COUNTY	Length	Type	Estimated Cost	Amount Spent to Date	County Participation
2	26	Columbia .....	11.01	Concrete. ....	\$ 370,697.14	\$ 76,325.14	\$ 17,690.00
2	37-D	Alachua .....	2.14	Sheet Asphalt .....	145,753.87	38,185.18	72,876.93
4	40-A	Brevard .....	16.17	Surf. Treat. ....	445,440.07	213,939.36	87,318.00
4	40-D	Brevard .....	6.72	Surf. Treat. ....	180,345.68	103,333.42	36,288.00
4	40-E	Brevard .....	13.60	Surf. Treat. ....	315,218.29	223,414.36	73,440.00
2	43	Marion .....	10.44	Sheet Asphalt .....	381,991.44	32,269.21	.....
2	44	Lake .....	10.52	Bit. Conc. ....	395,611.38	178,749.13	237,676.38
1	514	Jackson .....	11.00	Sand Clay .....	71,693.86	17,510.62	.....
4	521	Nassau .....	12.41	Surf. Treat. ....	406,338.46	404,878.84	.....
24	534	Brevard .....	14.07	Surf. Treat. ....	342,896.44	203,319.21	120,000.00
5	564-A	Charlotte .....	10.88	Surf. Treat. ....	181,539.07	3,787.31	45,000.00
5	564-B	Charlotte .....	7.00	Marl .....	119,395.98	105,046.77	.....
1	567	Walton .....	21.35	Sand Clay .....	111,257.40	18,606.34	.....
1	571	Madison .....	14.73	Sand Clay .....	151,202.31	129,265.93	.....
9	574	Madison .....	11.06	Surf. Treat. ....	250,629.21	70,237.06	75,269.65
5	576	Sarasota .....	5.68	Surf. Treat. ....	173,776.21	45,749.65	.....
1	579	Holmes .....	8.62	Sand Clay .....	95,600.00	93,768.04	5,012.00
1	586	Jackson .....	17.37	Sand Clay .....	145,895.25	83,435.25	.....
3	588	Putnam .....	2.34	Sheet Asphalt .....	69,796.97	693.90	.....
3	595	Volusia .....	7.43	Surf. Treat. ....	143,964.02	748.38	35,000.00
4	597	Volusia .....	16.24	Surf. Treat. ....	416,854.51	96,439.83	149,100.00
1	598-A	Jefferson .....	9.45	Sand Clay .....	84,694.92	74,694.92	.....
1	598-B	Jefferson .....	7.80	Sand Clay .....	84,350.98	72,350.98	.....

2	599	DeSoto .....	7.10	Marl .....	30,500.00	26,798.39	19,362.64
4	604	Volusia .....	7.72	Surf. Treat. ....	222,195.54	53,661.45	70,900.00
13	607-B	Clay .....	5.68	Surf. Treat. ....	111,738.76	19,390.33	.....
4	608	Brevard .....	9.29	Concrete .....	405,581.20	57,811.86	51,961.83
1	612	Leon .....	17.58	Sand Clay .....	185,323.03	55,784.66	.....
5	613	Manatee .....	4.62	Surf. Treat. ....	138,600.00	3,354.79	.....
1	621	Okaloosa .....	17.15	Sand Clay .....	91,020.00	1,588.01	.....
2	622	Lake .....	.22	Bit. Conc. ....	8,217.80	6,509.77	8,217.80
35	623	Madison .....	12.13	Sand Clay .....	117,554.91	14,537.13	.....
3	627	Putnam .....	3.71	Surf. Treat. ....	69,767.56	3,669.95	46,375.00
3	628	Volusia .....	11.90	Surf. Treat. ....	268,000.00	10,726.00	100,000.00
8	630	Highlands .....	11.00	Surf. Treat. ....	204,623.66	4,816.91	.....
1	634	Jackson .....	11.15	Sand Clay .....	110,519.46	26,688.76	.....
8	636	St. Lucie .....	12.2	Surf. Treat. ....	248,476.40	665.45	76,000.00
10	637	Leon .....	18.08	Sand Clay .....	114,348.78	1,629.91	.....
10	646	Franklin .....	18.50	Sand Clay .....	50,000.00	946.48	.....
		Totals .....	414.68		\$ 7,461,410.56	\$ 2,575,328.68	\$ 1,327,488.23

Note: Projects less than 500 are Federal Aid.  
Above 500 are State Aid.

CONTRACTS AWARDED BY STATE ROAD DEPARTMENT OF FLORIDA  
January 1st, 1923, to December 31st, 1923

Road No.	Project No.	COUNTY	CONTRACTOR	Length Miles	Length Feet	Contract	Type
24	534-A	Brevard .....	J. D. Donahoo .....	2.65	.....	\$ 25,810.00	Emb.
5	570	Manatee .....	Morgan-Hill Paving Co. ....	3.076	.....	140,511.23	B. M.
8	562-A	Highlands .....	McCormick & Delaney .....	5.378	.....	13,614.60	Grade
7	35	Escambia .....	Hancock Brothers .....	5.00	.....	138,556.25	Conc.
2	520	Marion .....	Morgan-Hill Co. ....	15.53	.....	12,771.00	S. T.
3	532	Volusia .....	J. Y. Wilson.....	18.30	.....	7,840.00	S. T.
4	554	Brevard .....	The Barber-Fortin Co.....	5.00	.....	87,929.52	Rock
4	507	Flagler .....	The Barber-Fortin Co.....	14.4	.....	186,899.60	Rock
4	546	Brevard .....	The Barber-Fortin Co.....	5.00	.....	89,326.12	Rock
8	562-B	Highlands .....	W. P. Kennedy.....	10.708	.....	321,595.55	S. A.
2	27-A-B	Columbia .....	C. F. Lytle.....	12.36	.....	492,719.99	Conc.
24	534-B	Brevard .....	Noll & Noll .....	11.70	.....	200,246.40	Rock
1	568	Jackson .....	Ed Pettus .....	....	3,315	96,213.00	Timber
4	39	St. Lucie .....	A. Bentley & Sons Co.....	....	901	170,315.00	Conc.
24	584	Osceola .....	Noll & Noll.....	2.0	.....	38,351.00	Brick
5	583	Hillsboro .....	Robert Muggee Co.....	....	172	61,104.60	Conc.
5	589	Lee .....	Board Co. Commissioners.....	8.00	.....	20,000.00	Marl
17	527	Pinellas .....	E. W. Parker .....	....	1,555	26,760.81	Emb.
8	523	Okeechobee .....	M. J. Cole.....	8.25	.....	187,876.46	Rock
4	36-B	St. Lucie .....	C. F. Lytle.....	7.121	.....	262,026.00	Conc.
5	545	Hernando .....	Broadbent & Groeting.....	9.517	.....	287,790.98	S. A.
2	37-E	Alachua .....	Wm. P. McDonald Const. Co....	7.962	.....	302,609.47	S. A.
4	597	Volusia .....	J. Y. Wilson.....	16.24	.....	347,280.89	Rock

2	37-A	Alachua	F. W. Long & Co.	.701		25,855.04	S. A.
2	37-D	Alachua	Fla. Drainage & Const. Co.	2.14		129,657.01	Emb.
2	37-C	Alachua	F. W. Long & Co.	3.261		138,489.77	S. A.
4	40-D	Brevard	J. Y. Wilson	6.727		144,348.24	Rock
4	40-A	Brevard	C. F. Lytle	16.169		405,951.76	Rock
5	564-B	Charlotte	Boone & Wester	7.00		31,923.00	Grade
15	526	Pinellas	Tampa Sand & Shell Co.		1,500	17,446.00	Emb.
1	38-A	Escambia	Hardaway Contracting Co.	2.3	4,515	513,248.00	Emb.
4	521	Nassau	Morgan-Hill Paving Co.	12.42		277,846.33	Rock
4	40-E	Brevard	Langston Const. Co.	13.59		286,562.08	Rock
4	604	Volusia	C. F. Lytle	7.72		201,995.59	Rock
5	544-A	Pasco	F. S. Whitney	8.75		118,254.06	Rock
5	544-B	Pasco	The Barber-Fortin Co.	11.33		270,054.19	Rock
1	571	Madison	Hunter & Gladwell	14.73		100,978.44	S. C.
5	576	Sarasota	S. T. Buchannan & Son	5.68		48,510.10	Emb.
2	599	DeSoto	M. M. Boyd	7.10		17,829.39	Marl
			Total	287.80	12,056	\$ 6,247,115.47	

CONTRACTS AWARDED BY STATE ROAD DEPARTMENT  
From January 1, 1924 to December 31, 1924

Road No.	Project No.	COUNTY	CONTRACTOR	Length Miles	Length Feet	Contract Cost + 10%	Type
1	598-A	Jefferson .....	Bryson Const. Co.....	9.45	.....	\$ 44,253.00	S. C. ✕
5	564-A	Charlotte .....	Edgar Chapman .....	10.885	.....	92,390.03	G. & D.
13	572	Bradford .....	L. M. Gray.....	7.00	.....	96,765.59	Rock.
13	607	Bradford .....	L. M. Gray.....	5.10	.....	70,679.12	Rock.
13	594	Bradford .....	L. M. Gray.....	9.10	.....	117,132.35	Rock.
2	563	Osceola .....	Ed Pettus .....	....	315	12,062.60	Bridges.
8	562-A	Highlands .....	J. J. Johnston .....	....	375	11,556.60	Bridges.
4	36-A	St. Lucie .....	Higgins Const. Co.....	....	72	16,322.04	Conc. Brg.
4	620	St. Lucie .....	Higgins Const. Co.....	....	45	3,672.90	Tim. Brg.
5	564-B	Charlotte .....	Boone & Wester.....	....	105	11,004.40	Tim. Brg.
2	37-D	Alachua .....	C. T. Dawkins.....	....	60	31,552.40	Conc. Brg.
3	575	Putnam .....	Ocala Lime Rock.....	5.46	.....	39,688.00	Rock.
5	564-B	Charlotte .....	Boone & Wester.....	9.54	.....	73,276.28	M. Surf.
12	44	Lake .....	Sou. Paving Const. Co.....	10.529	.....	395,611.38	B. C. Surf.
5	625	Citrus .....	Barber-Fortin .....	10.86	.....	195,328.35	Rock.
5	626	Citrus .....	Barber-Fortin .....	6.61	.....	106,155.48	Rock.
2	622	Lake .....	Sou. Paving Const. Co.....	.251	.....	8,217.80	B. C. Surf.
8	582	Okeechobee .....	W. J. Conners .....	....	3,122	177,941.61	C. & S.
8	562-A	Highlands .....	Weeks & Jackson.....	5.37	.....	29,110.62	Bartow C.
8	629	Highlands .....	Mickler & McLeod.....	6.00	.....	40,270.23	Bartow C.
8	630	Highlands .....	Meyers Const. Co.....	11.00	.....	120,109.44	Rock Base.
24	534	Brevard .....	Ed Pettus .....	....	765	28,846.40	Timb. Brg.
4	601	St. Johns .....	Ed Pettus .....	....	480	22,994.18	Timb. Brg.
8	636	St. Lucie .....	C. F. Lytle .....	12.2	.....	248,476.40	Rock Base.



4	39-B	St. Lucie-Brevard...	Waldeck & Deal.....	.25	.....	45,567.05	Appr. Emb.
5	545	Hernando .....	Gillespie & North.....	....	185	8,302.25	Overh. Xing.
2	43	Marion .....	W. P. McDonald Const. Co...	10.44	.....	356,483.51	Sheet Asph.
2	43	Marion .....	Ward-Latham Co. ....	....	120	18,903.50	Conc. Overh.
2	26	Columbia .....	C. F. Lytle .....	10.99	.....	330,211.54	P. Conc.
4	608	Brevard .....	C. F. Lytle.....	9.25	.....	320,025.00	P. Conc.
5	564-A	Charlotte .....	Broadbent & Groeting.....	10.38	.....	181,538.07	Rock Base.
9	574	Madison .....	Duval Engr. & Const. Co...	11.66	.....	180,392.16	Rock Base.
5	576	Sarasota .....	Broadbent Const. Co.....	5.68	.....	109,055.10	Rock Base.
5	593	Manatee .....	C. F. Lytle.....	....	3,600	842,330.50	Conc. Brdg.
			Total .....	178.57	9,244	\$ 4,386,225.88	

## MAINTENANCE

It was the common belief for a number of years that when a road has been constructed that expense on it was ended and in too many cases this theory was put into practice. This idea has at last become obsolete and those most familiar with the road situation have found out that the maintenance of a highway should begin the day its construction is completed.

This Department fully realizes the necessity of maintaining the roads it constructs and at the present time has a very systematic maintenance force, which includes the taking care of all the roads constructed by or under the supervision of the Department.

It has been demonstrated that in most cases the cost of the maintenance of any road is about in proportion to the travel the road carries, but this is not always the case. The cost of a road surface is about inversely in proportion to the cost of the surface to be maintained; that is, the cheaper the surface the higher the maintenance cost. This Department has constructed roads on the surface of which practically nothing has been spent, but regularly organized forces are employed on these roads repairing the shoulders and keeping the drainage ditches open.

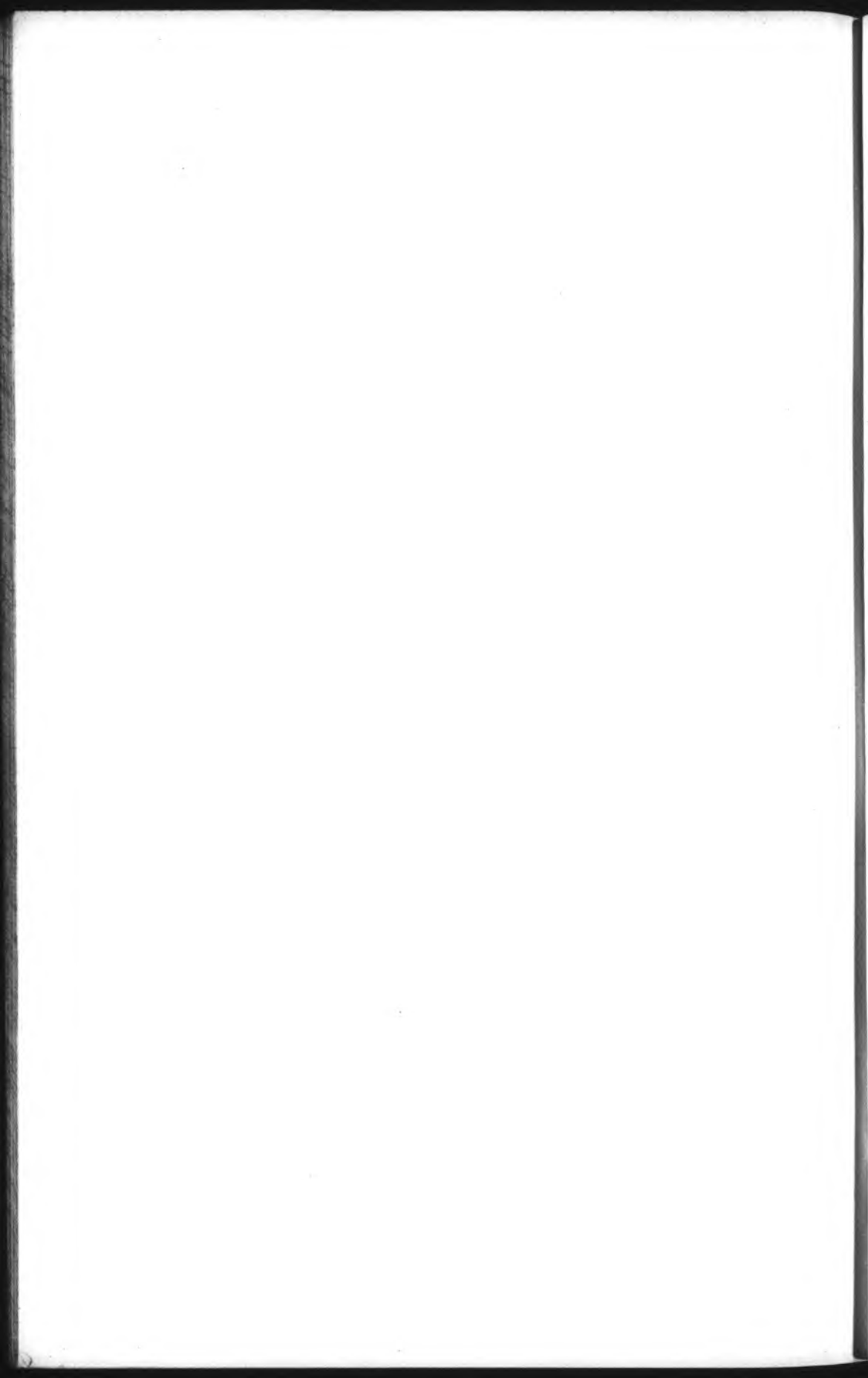
One of the largest maintenance charges on the hard-surfaced roads in Florida is the sodding of the shoulders and in protecting the same until the grass has gotten such a start as not to be destroyed by rains or by cattle which graze along the highways.

On the sand-clay roads the grass shoulders are not so essential, hence practically all the cost of maintenance is in keeping the surface machined and dragged as well as keeping the drainage ditches open. The maintenance of a sand-clay road also includes the adding of clay and sand in such quantities as will replace that part either blown away in dust or washed off the road in heavy rains.

It is presumed on a perfectly maintained road of any



Surface-treated Macadam, Project No. 554, Brevard County.



type that the quantity of material in the surface at any time will be the same as that of the road when first completed.

For the past two years this Department has been carrying on its maintenance work on a budget system and has found this to work very well and the costs for the year have conformed very closely to the budget prepared.

In 1923 a budget was prepared for the maintenance of 550 miles of road at a total cost of \$138,833.87 or an average cost of \$252.42 per mile of road maintained. In 1924 another budget for maintenance was prepared for 898 miles of road at an estimated cost of \$444,689.60, or an average cost of \$495.20 per mile. For the year 1925 the budget which has been prepared includes the maintenance of 1,275 miles of road at a total cost of \$552,369.00, or an average of \$433.22 per mile. This may appear to some readers to be a rather high maintenance cost, but as the average cost of the roads constructed has been something like \$20,000.00 per mile, you will see that the maintenance cost is only a little more than 2 per cent of the cost of the road per year.

### EQUIPMENT DIVISION

The headquarters of the Equipment Division, together with the warehouses for supplies, are located near Gainesville, Florida. The buildings and grounds occupied by this division are the property of the State. This is one of the most important and a very valuable asset of the Department. Machine shops are maintained which are equipped to do most any class of repair work on any machinery operated in the construction and maintenance of roads.

In equipping these shops, about 90 per cent of the machinery installed was received from the Federal Government which had been declared surplus by the War Department.

To equip shops similar to what we now have would require the outlay of many thousands of dollars. It is not

practical nor economical to send every piece of machinery to the central shops every time it needs repair, and in such instances where repairs are of a minor character, a mechanic is sent out from the shops to do the work, or it is done by some local shop in the vicinity of where the machinery is located. When a piece of equipment needs major repairs or complete overhauling, it is sent to the Gainesville shops either under its own power, by truck, or by freight, and it is given a complete overhauling and new parts are substituted for those badly worn or broken.

When any machinery is brought into the shops not only the broken parts are replaced, but before it is sent out again the machine is thoroughly examined and adjusted. A small stock of repair parts for the different classes of machinery used by the Department is always carried so that emergencies can be handled without waiting for parts to come from the factory.

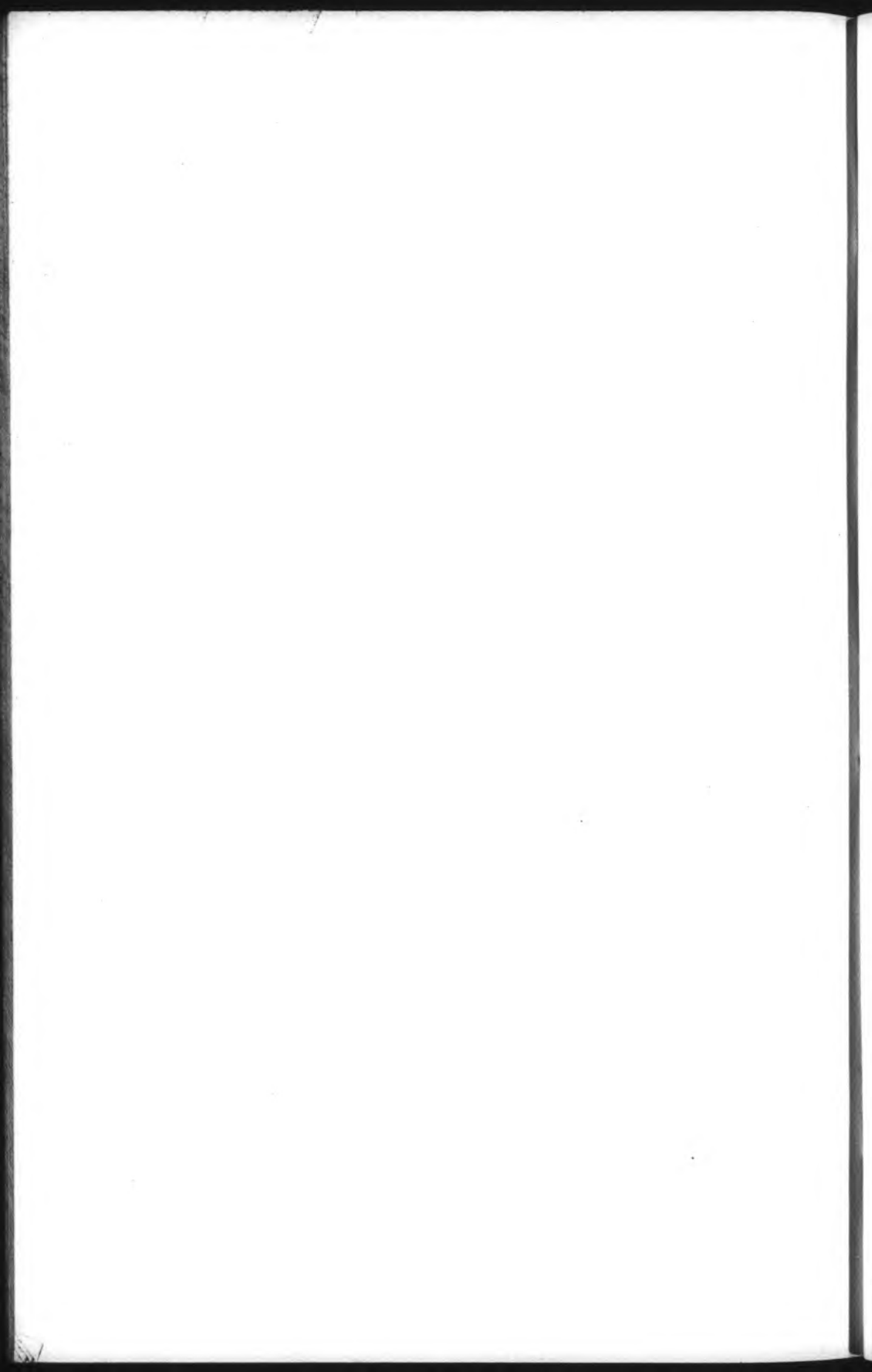
All the machinery which is worn to such an extent that it is not profitable to further repair is taken to the shops, dismantled and such parts as will be serviceable are stocked for use in repairing other machines of the same class. A stock room containing salvaged repair parts is maintained and has been the means of saving the Department many dollars on repair parts.

All the machinery bought by the Department is charged to the Equipment Division and when this equipment is used on the road a certain rental charge is placed against the work done and credited to the Equipment Division. We have found that a very low rental charge will offset the expenses of this division.

Practically all the road-building equipment received from the Federal Government had been used, some a great deal and some very little, so it is not possible to estimate the condition of this equipment by inspection only. We have adopted a rule to overhaul every piece of equipment when it is received and we are then certain of its condition and know just what class of work it is capable of doing.



Convincing proof that the Natural Beauty of the State is not lost in the construction of high type Roads.





When the forces employed at the shops have completed the repair work on equipment sent in from the roads they are then used in reconditioning machinery received from the War Department, so that it will be ready to put into operation when the opportunity presents itself.

The Department has constructed several large warehouses on its grounds and practically all the materials entering into their construction were gotten from the War Department.

The stock of convict supplies is also carried by the Equipment Division and they are shipped out on requisition from the Tallahassee office to the camps when needed. Requisitions for all equipment, repair parts and supplies are submitted to the Tallahassee office and purchases are made by this office in the manner prescribed by law.

## ACCOUNTING DEPARTMENT

### PERSONNEL

S. L. Walters .....	Auditor
Bettie Herring .....	Bookkeeper
W. A. Williams .....	Bookkeeper
Mrs. Floyd Jones .....	Bookkeeper
Pauline Kelly .....	Stenographer-Clerk
M. K. Cooke .....	Clerk

### ACCOUNTING METHODS

Since our last Report, our disbursements have increased from \$300,000.00 to \$600,000.00 per month. Notwithstanding the fact that our work has greatly increased, we have, up to this time, been able to take care of the situation without employment of additional help.

It might be interesting to state how the many bills received in this office are handled.

First, the entire State is divided into five divisions

Each division is located most convenient for the handling of work in the several counties assigned that division.

Bills are first approved by representative in direct charge of the work, then forwarded to Division Office, where extensions, calculations, etc., are checked. All bills are held in Division Office until first of following month and then listed to this department on prescribed forms. A careful audit is given all accounts received from the Division Office, and when audited, are grouped according to projects on sheets or accumulative vouchers. These vouchers are then transmitted to Chairman and State Highway Engineer for review and approval. After approval, vouchers are numbered and delivered to State Comptroller, where they are again checked, and, if correct, warrants are written. Warrants are transmitted to this department for mailing to creditors.

With a view of elimination of duplicate payments, all accounts are recorded under name of the creditor, date received and amount. When warrants are received back from Comptroller, we refer to this record and insert warrant number, and date mailed. This system enables us to answer quickly and intelligently all correspondence relative to bills recorded by us; also, reduces duplication to a minimum.

Monthly reports are prepared in this department for benefit of Chairman and Members of the Board. Such reports cover detailed data as to receipts and disbursements; also, other information which we think will be of benefit to them.

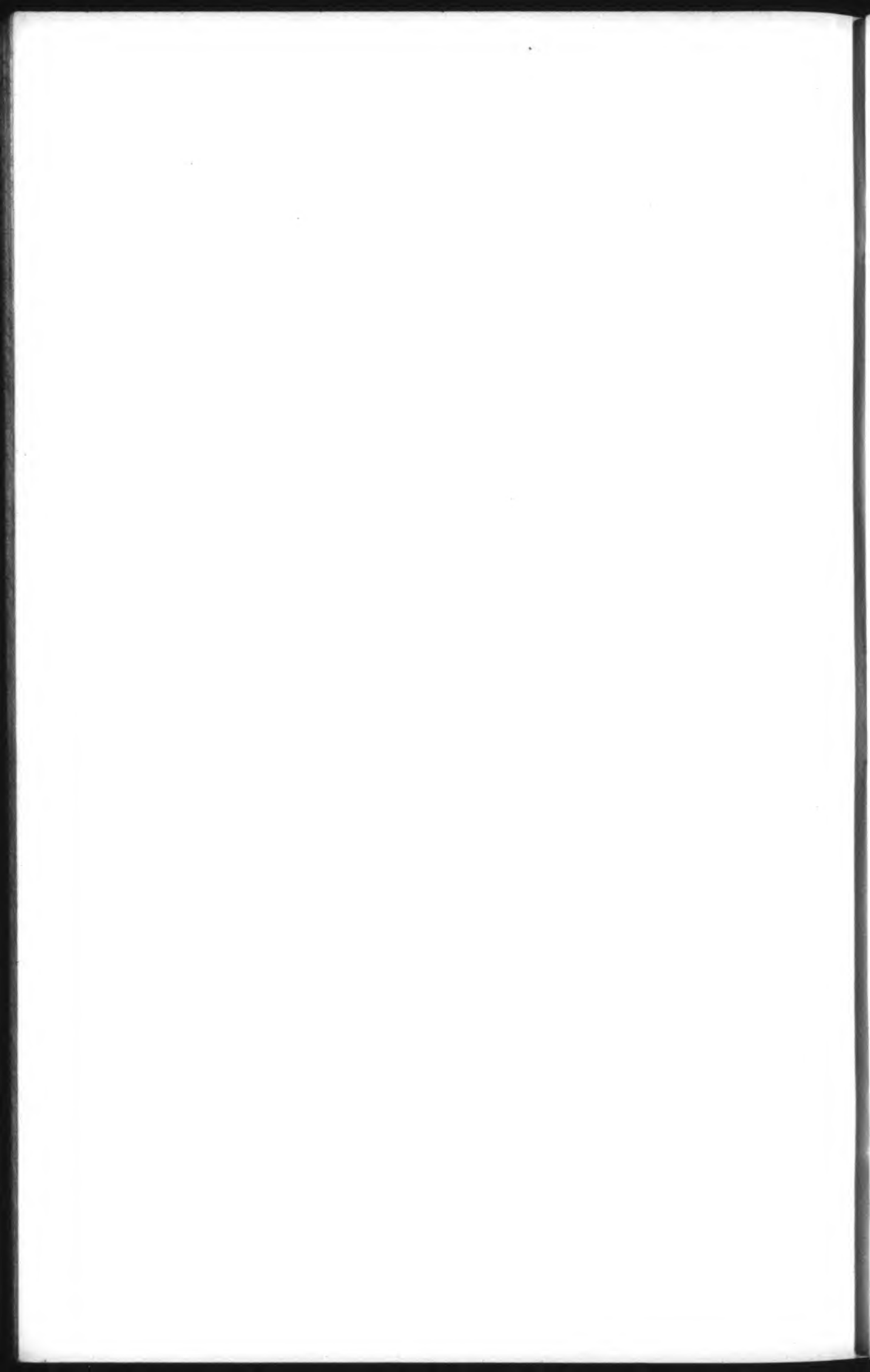
Our records of receipts and disbursements by funds are balanced at the end of each month, with records of Treasurer and Comptroller.

During the last two years, where funds would permit, we took advantage of discounts which resulted in a saving of about \$10,000.00, and hope to be in position to discount a greater number of bills during the next biennial year.

Accounts of the Equipment Division at Gainesville are



A typical scene of Florida Beauty, along the Indian River, State Road No. 4.



under the direction of the Auditor. Monthly reports are rendered by the Superintendent of Equipment, which are checked against records in this office.

Necessary records are also kept in this department, covering personnel of prisoners in each camp; transfers from and to Raiford; discharges, escapes, captures, etc. Provisions and supplies incident to operation of camps are purchased by the Auditor, such purchases, of course, being approved by the Chairman.

While the clerical help allowed this department will not allow as comprehensive system of accounts as we would like, we feel that we have such system as set forth all accounts in an intelligent manner. Our accounts have just been audited by Messrs. Campbell and Wainwright, State Auditors, and we quote from their report, as follows:

"The Accounting System of the Department under the supervision of Mr. S. L. Walters, Auditor, appears to be thorough and accurate and the accounts appear to be classified sufficiently and are kept in as detailed a manner as is possible with his present clerical force."

#### PURCHASES

Stationery and other office supplies for entire department are purchased by, or with the approval of, the Auditor. In the interest of economy, we invite bids on stationery and office furniture. Carbon paper and typewriter ribbons are purchased on the coupon plan. A stock of stationery is carried and issued out on requisitions properly approved.

## FINANCIAL STATEMENT

Balance brought forward January 1st, 1923.....\$ 735,516.93

## Receipts for the year 1923:

5% Auto-Administration Fund..\$	92,968.50	
70% Auto-State Federal Aid....	1,301,560.08	
State Road Tax .....	427,243.17	
From Federal Government.....	820,063.74	
Gasoline Inspection Fund.....	91,884.70	
Gasoline—2c Gallon Tax Fund..	1,261,845.08	
From Counties .....	515,988.35	
Miscellaneous Collections .....	170,812.20	\$ 4,682,365.82

## Receipts for the year 1924:

5% Auto-Administration Fund..\$	112,579.83	
70% Auto State Federal Aid....	1,576,118.04	
State Road Tax.....	424,392.88	
From Federal Government.....	1,071,287.04	
Gasoline Inspection Fund.....	126,325.66	
Gasoline—2c Gallon Tax Fund..	2,448,855.49	
Auto Registration Fund .....	70,001.40	
From Counties .....	879,219.83	
Miscellaneous .....	75,904.55	\$ 6,784,684.72

Total ..... \$12,202,567.47

## DISBURSEMENTS

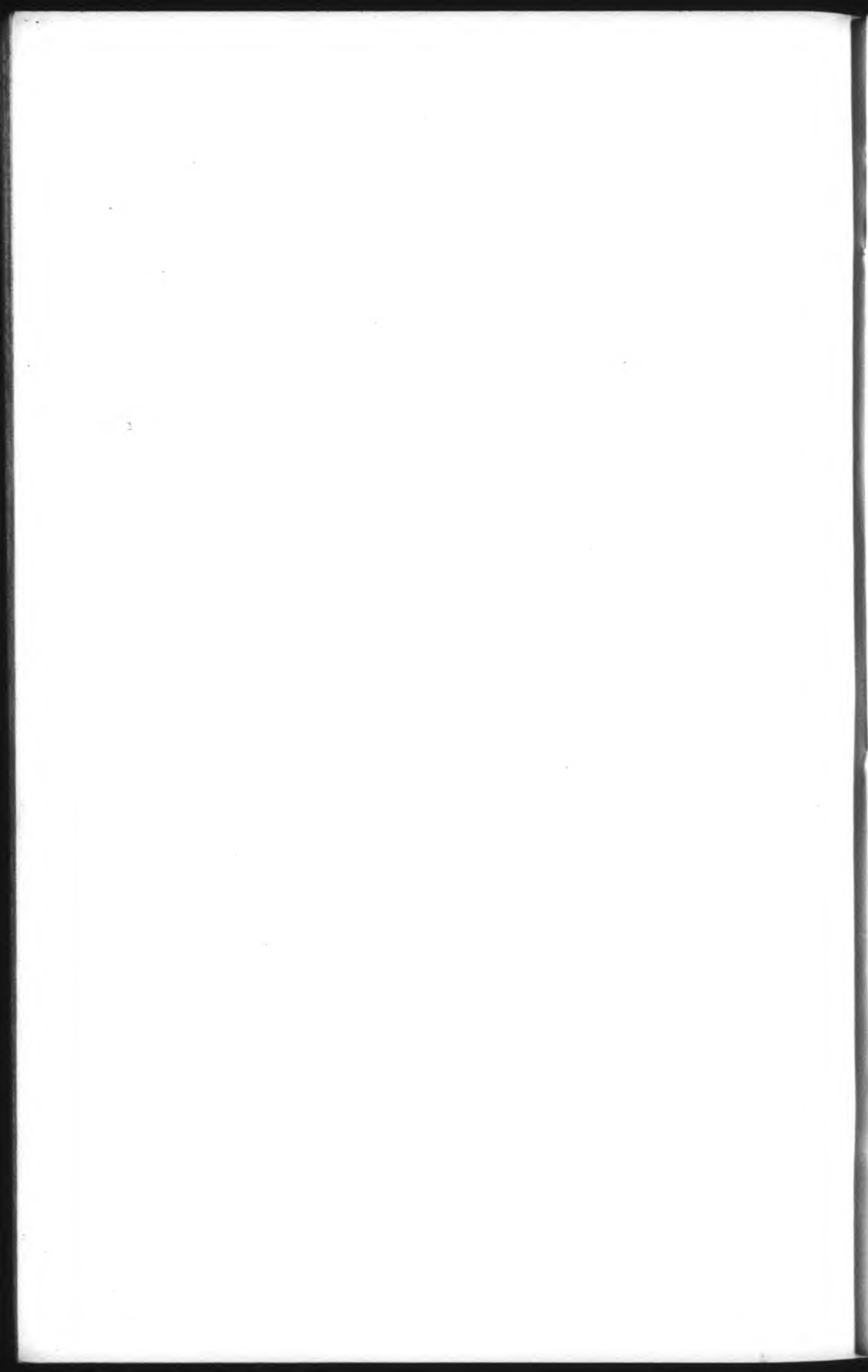
Administration and General Office Expense	\$ 67,393.81
Engineering Expenses .....	563,314.52
Construction and Maintenance of Roads and Bridges	9,656,917.13
Equipment Division .....	838,114.73
State Road Convicts.....	529,481.37

Total .....\$11,655,221.56

Balance to January 1st, 1925.....\$ 547,345.91



View on State Road No. 2, Federal Aid Project No. 37; Sheet Asphalt.





### "FLORIDA HIGHWAYS"

For more than a year past Florida Highways, a monthly magazine, has been published under the direction of, and as the official publication of, the State Road Department. Its purpose is to give from month to month a resume of the work of the Department, and to distribute information generally regarding road construction and maintenance.

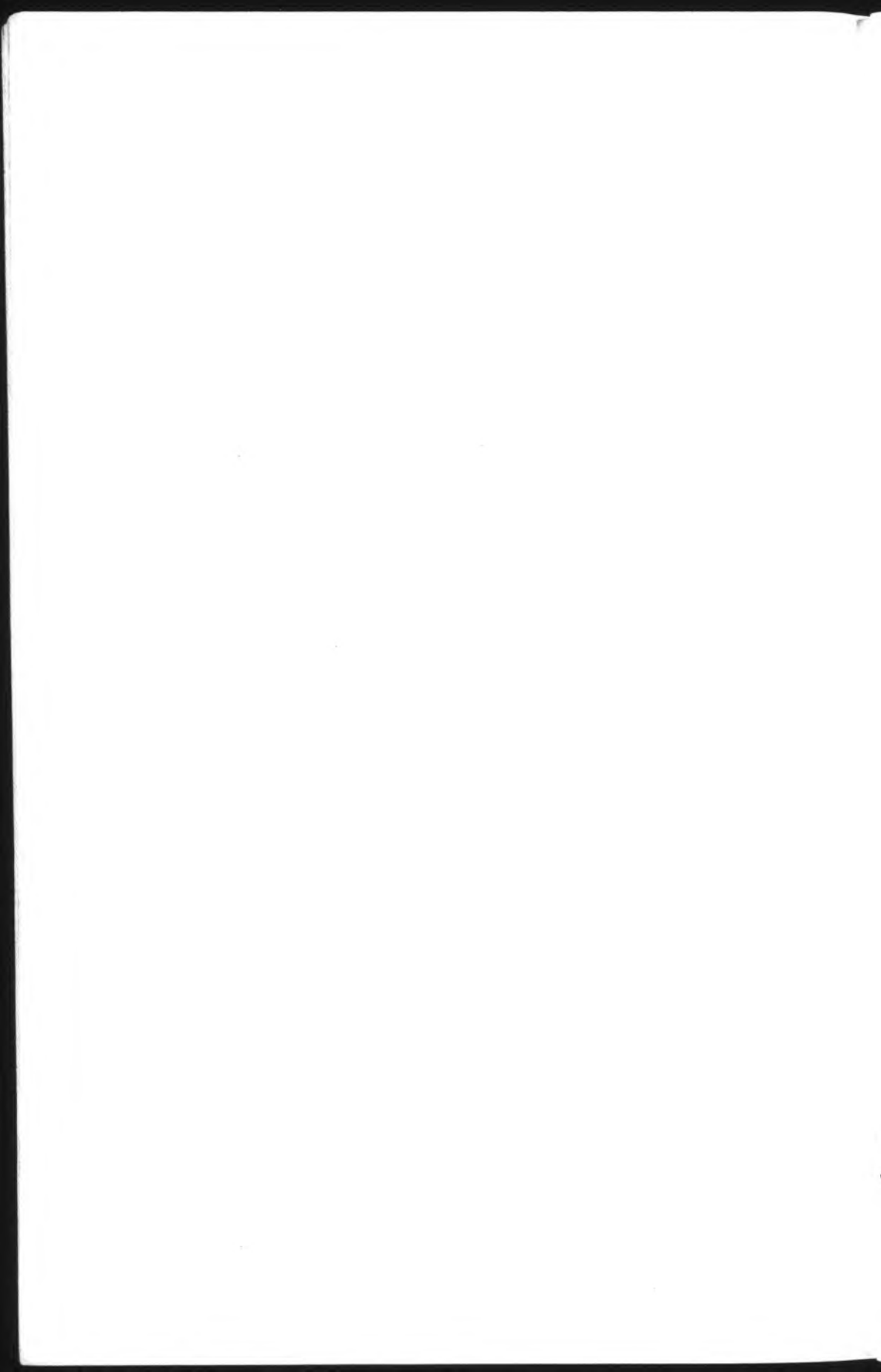
A cordial reception has greeted the little magazine, and its popularity, if one may judge by the number of subscribers and the length of its mailing list, is steadily increasing.

From its inception the publication has been issued without expense to the State, the cooperation of its advertisers making it self-sustaining. In fact, every cut appearing in the pages of this annual report was donated to the Department by the magazine, and it follows, therefore, that Florida Highways is not only self-supporting, but has contributed materially to the State.





One type of Guard Rail used by Department on dangerous fills.





State Project No. 546, Ojus Rock, surface-treated, Road No. 4, Brevard County.